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Report on the individual review of the annual submission of Cyprus submitted in 2017*

Note by the expert review team

Summary

Each Party included in Annex I to the Convention must submit an annual greenhouse gas (GHG) inventory covering emissions and removals of GHG emissions for all years from the base year (or period) to two years before the inventory due date (decision 24/CP.19). Parties included in Annex I to the Convention that are Parties to the Kyoto Protocol are also required to report supplementary information under Article 7, paragraph 1, of the Kyoto Protocol with the inventory submission due under the Convention. This report presents the results of the individual inventory review of the 2017 annual submission of Cyprus, conducted by an expert review team in accordance with the "Guidelines for review under Article 8 of the Kyoto Protocol". The review took place from 25 to 30 September 2017 in Bonn, Germany.

* In the symbol for this document, 2017 refers to the year in which the inventory was submitted, not to the year of publication.

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Abbreviations and acronyms

2006 IPCC Guidelines	*2006 IPCC Guidelines for National Greenhouse Gas Inventories*
AAU	assigned amount unit
AD	activity data
Annex A sources	source categories included in Annex A to the Kyoto Protocol
AR	afforestation and reforestation
Article 8 review guidelines	"Guidelines for review under Article 8 of the Kyoto Protocol"
CER	certified emission reduction
CH_4	methane
CM	cropland management
CO_2	carbon dioxide
CO_2 eq	carbon dioxide equivalent
CPR	commitment period reserve
CRF	common reporting format
EF	emission factor
ERT	expert review team
ERU	emission reduction unit
EU ETS	European Union emissions trading system
FM	forest management
FMRL	forest management reference level
$Frac_{BURN}$	fraction of residue burned in the field
GHG	greenhouse gas
GM	grazing land management
HFC	hydrofluorocarbon
HFO	heavy fuel oil
HWP	harvested wood products
IE	included elsewhere
IEF	implied emission factor
IPCC	Intergovernmental Panel on Climate Change
IPCC good practice guidance	*Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*
IPPU	industrial processes and product use
ITL	international transaction log
KP-LULUCF activities	activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol
Kyoto Protocol Supplement	*2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol*
LULUCF	land use, land-use change and forestry
MCF	methane correction factor
MSW	municipal solid waste
N	nitrogen
NA	not applicable
NE	not estimated
NF_3	nitrogen trifluoride
NIR	national inventory report
NMVOC	non-methane volatile organic compound
NO	not occurring
N_2O	nitrous oxide

NR	not reported
ODS	ozone-depleting substances
PFC	perfluorocarbon
QA/QC	quality assurance/quality control
RMU	removal unit
RV	revegetation
SEF	standard electronic format
SF_6	sulfur hexafluoride
SIAR	standard independent assessment report
SWDS	solid waste disposal systems
UNFCCC Annex I inventory reporting guidelines	"Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories"
UNFCCC review guidelines	"Guidelines for the technical review of information reported under the Convention related to greenhouse gas inventories, biennial reports and national communications by Parties included in Annex I to the Convention"
WDR	wetland drainage and rewetting
Wetlands Supplement	*2013 Supplement to the 2006 Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories: Wetlands*

I. Introduction[1]

1. This report covers the review of the 2017 annual submission of Cyprus organized by the secretariat, in accordance with the Article 8 review guidelines (decision 22/CMP.1, as revised by decision 4/CMP.11). In accordance with the Article 8 review guidelines, this review process also encompasses the review under the Convention as described in the UNFCCC review guidelines, particularly in part III thereof, namely the "UNFCCC guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention" (decision 13/CP.20). The review took place from 25 to 30 September 2017 in Bonn, Germany, and was coordinated by Ms. Lisa Hanle, Ms. Alma Jean and Mr. Simon Wear (secretariat). Table 1 provides information on the composition of the ERT that conducted the review of Cyprus.

Table 1
Composition of the expert review team that conducted the review of Cyprus

Area of expertise	*Name*	*Party*
Generalist	Ms. Mausami Desai	United States of America
	Ms. Jolanta Merkeliene	Lithuania
Energy	Mr. Naofumi Kosaka	Japan
	Ms. Brooke Perkins	Australia
	Mr. Michael Smith	New Zealand
IPPU	Mr. Kendal Blanco-Salas	Costa Rica
	Ms. Ils Moorkens	Belgium
	Mr. Ioannis Sempos	Greece
Agriculture	Ms. Marta Alfaro	Chile
	Ms. Fatou Gaye	Gambia
	Ms. Alice Ryan	New Zealand
LULUCF	Ms. Esther Mertens	Belgium
	Mr. Koki Okawa	Japan
	Mr. Igor Onopchuk	Ukraine
	Mr. Iordanis Tzamtzis	Greece
Waste	Mr. Mark Hunstone	Australia
	Mr. Gabor Kis-Kovacs	Hungary
	Mr. Phindile Mangwana	South Africa
Lead reviewers	Ms. Alfaro	
	Mr. Hunstone	

[1] At the time of publication of this report, Cyprus had submitted its instrument of ratification of the Doha Amendment; however, the amendment had not yet entered into force. The implementation of the provisions of the Doha Amendment is therefore considered in this report in the context of decision 1/CMP.8, paragraph 6, pending the entry into force of the amendment.

2. The basis of the findings in this report is the assessment by the ERT of the consistency of the Party's 2017 annual submission with the Article 8 review guidelines. The ERT has made recommendations that Cyprus resolve the findings related to issues,[2] including issues designated as problems.[3] Other findings, and, if applicable, the encouragements of the ERT to Cyprus to resolve them, are also included.

3. A draft version of this report was communicated to the Government of Cyprus, which provided no comments.

4. Annex I shows annual GHG emissions for Cyprus, including totals excluding and including the LULUCF sector, indirect CO_2 emissions and emissions by gas and by sector. Annex I also contains background data related to emissions and removals from KP-LULUCF activities, if elected, by gas, sector and activity for Cyprus.

5. Information to be included in the compilation and accounting database can be found in annex II.

II. Summary and general assessment of the 2017 annual submission

6. Table 2 provides the assessment by the ERT of the annual submission with respect to the tasks undertaken during the review. Further information on the issues identified, as well as additional findings, may be found in tables 3 and 5.

Table 2
Summary of review results and general assessment of the inventory of Cyprus

Assessment			*Issue or problem ID#(s) in table 3 and or 5[a]*
Dates of submission	Original submission: 8 May 2017 (NIR), 8 May 2017, version 1 (CRF tables), 5 September 2017 (SEF-CP2-2016) Revised submission: 7 November 2017, version 2 (CRF tables) Unless otherwise specified, the values from the latest submission are used in this report		
Review format	Centralized		
Application of the requirements of the UNFCCC Annex I inventory reporting guidelines and Wetlands Supplement (if applicable)	1. Have any issues been identified in the following areas:		
	(a) Identification of key categories	Yes	G.21
	(b) Selection and use of methodologies and assumptions	Yes	G.10, E.5, E.8, E.9, I.18, I.19, I.23, A.5, A.10, A.11, A.13, L.3, L.6, W.5, W.10
	(c) Development and selection of EFs	Yes	E.21
	(d) Collection and selection of AD	Yes	G.8, I.10, A.9, L.15
	(e) Reporting of recalculations	Yes	W.6
	(f) Reporting of a consistent time series	Yes	E.2, E.3, E.20, A.12, L.17

[2] Issues are defined in decision 13/CP.20, annex, paragraph 81.

[3] Problems are defined in decision 22/CMP.1, annex, paragraphs 68 and 69, as revised by decision 4/CMP.11.

Assessment			*Issue or problem ID(s) in table 3 and or 5[a]*
	(g) Reporting of uncertainties, including methodologies	Yes	G.14, G.16
	(h) QA/QC	QA/QC procedures were assessed in the context of the national system (see para. 2 in this table)	
	(i) Missing categories/completeness[b]	Yes	I.6, I.7, I.12, L.9, L.10, L.19, KL.1
	(j) Application of corrections to the inventory	No	
Significance threshold	For categories reported as insignificant, has the Party provided sufficient information showing that the likely level of emissions meets the criteria in paragraph 37(b) of the UNFCCC Annex I inventory reporting guidelines?	Yes	
Description of trends	Did the ERT conclude that the description in the NIR of the trends for the different gases and sectors is reasonable?	No	E.3, I.17, I.20
Supplementary information under the Kyoto Protocol	2. Have any issues been identified related to the national system:		
	(a) The overall organization of the national system, including the effectiveness and reliability of the institutional, procedural and legal arrangements	Yes	G.3, G.7, G.22
	(b) Performance of the national system functions	Yes	G.22
	3. Have any issues been identified related to the national registry:		
	(a) Overall functioning of the national registry	Yes	G.18, G.23
	(b) Performance of the functions of the national registry and the technical standards for data exchange	No	
	4. Have any issues been identified related to reporting of information on ERUs, CERs, AAUs and RMUs and on discrepancies reported in accordance with decision 15/CMP.1, annex, chapter I.E, taking into consideration any findings or recommendations contained in the SIAR?	Yes	G.24
	5. Have any issues been identified in matters related to Article 3, paragraph 14, of the Kyoto Protocol, specifically problems related to the transparency, completeness or timeliness of reporting on the Party's activities related to the priority actions listed in decision 15/CMP.1, annex, paragraph 24, including any changes since the previous annual submission?	Yes	G.20
	6. Have any issues been identified related to the reporting of LULUCF activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, as follows:		
	(a) Reporting requirements in decision 2/CMP.8, annex II, paragraphs 1–5	Yes	KL.2
	(b) Demonstration of methodological consistency between the reference level and reporting on FM in accordance with decision 2/CMP.7,	Yes	KL.5

Assessment			*Issue or problem ID[a](s) in table 3 and/or 5[a]*
	annex, paragraph 14		
	(c) Reporting requirements of decision 6/CMP.9	Yes	KL.1, KL.5
	(d) Country-specific information to support provisions for natural disturbances, in accordance with decision 2/CMP.7, annex, paragraphs 33 and 34	Yes	KL.4
CPR	Was the CPR reported in accordance with the annex to decision 18/CP.7, the annex to decision 11/CMP.1 and decision 1/CMP.8, paragraph 18?	No	G.24
Adjustments	Has the ERT applied an adjustment under Article 5, paragraph 2, of the Kyoto Protocol?	No	
	Did the Party submit a revised estimate to replace a previously applied adjustment?	NA	Cyprus does not have a previously applied adjustment
Response from the Party during the review	Has the Party provided the ERT with responses to the questions raised, including the data and information necessary for the assessment of conformity with the UNFCCC Annex I inventory reporting guidelines and any further guidance adopted by the Conference of the Parties?	Yes	
Recommendation for an exceptional in-country review	On the basis of the issues identified, does the ERT recommend that the next review be conducted as an in-country review?	Yes	G.22; see also document FCCC/ARR/2016/CYP, annex III, chapter B
Question of implementation	Did the ERT list a question of implementation?	No	

[a] The ERT identified additional issues and/or problems in all sectors and for KP-LULUCF activities that are not listed in this table but are included in table 3 and/or 5.

[b] Missing categories for which methods are provided in the 2006 IPCC Guidelines may affect completeness and are listed in annex III.

III. Status of implementation of issues and/or problems raised in the previous review report

7. Table 3 compiles all the recommendations made in previous review reports that were included in the previous review report, published on 20 October 2017.[4] For each issue and/or problem, the ERT specified whether it believes the issue and/or problem has been resolved by the conclusion of the review of the 2017 annual submission and provided the rationale for its determination, which takes into consideration the publication date of the previous review report and national circumstances.

[4] FCCC/ARR/2016/CYP.

Table 3
Status of implementation of issues and/or problems raised in the previous review report of Cyprus

ID#	*Issue and/or problem classification*[a]	*Recommendation made in previous review report*	*ERT assessment and rationale*
General			
G.1	Inventory planning (G.2, 2016) (G.2, 2015) (table 3, 2013) Transparency	Improve the transparency of reporting on all sectors.	Addressing. A number of improvements were made to increase transparency across the sectors (e.g. see ID#s I.8, A.1, A.3, A.4, A.6 and A.7 below), but there are many pending transparency issues that have not been resolved (see ID#s G.9, G.12, G.14, E.1, E.6, E.7, E.10, I.2, I.4, I.5, I.11, I.13, L.1, L.4, L.5, L.12, L.13, L.14, L.16, W.1, W.2, W.4, KL.2, KL.3 and KL.4 below).
G.2	Inventory planning (G.11, 2016) (G.11, 2015) Transparency	Include in the NIR the description of institutional arrangements for, and the assignment of responsibilities between, the ministries and agencies for the timely data provision and national GHG inventory preparation.	Addressing. The description of current institutional arrangements is included in the NIR (section 1.2); however, during the review the Party explained why the necessary improvements to enhance the legal framework and institutional arrangements for the preparation of the national GHG inventory were not fully implemented (see ID#s G.3 below and G.22 in table 5).
G.3	Inventory planning (G.4, 2016) (G.4, 2015) (10, 2013) Adherence to the UNFCCC Annex I inventory reporting guidelines	Include the relevant ministries and agencies in the institutional arrangements for inventory preparation in order to make reporting on LULUCF possible.	Addressing. Necessary improvements to enhance the legal framework and institutional arrangements for the preparation of the national GHG inventory for the LULUCF sector were not fully implemented. The draft legislation was elaborated in 2016, but had not been adopted at the time of the review (see ID# G.22 in table 5). In response to the potential problem raised during the review, the Party informed the ERT that the decision of the Cypriot Council of Ministers on the national system for the preparation of the annual GHG inventory was adopted on 17 November 2017 and a legal framework was formally established to define the roles and responsibilities of specific ministries, agencies and other entities in relation to timely data provision and national GHG inventory preparation across all sectors, including the LULUCF sector.
G.4	Inventory planning (G.7, 2016) (G.7, 2015) (tables 3 and 4, 2013) Comparability	Report notation keys in the CRF tables instead of leaving cells blank and/or reporting zeros.	Addressing. Most of the cells are filled with the notation keys; however, there are still many blank cells in the CRF tables, especially in the LULUCF sector (see ID#s L.7 and L.8 below).
G.5	Inventory planning (G.8, 2016) (G.8, 2015) (table 4, 2013) Comparability	Provide relevant explanations in CRF table 9(a), specifically for all cases of the notation key "NE" being reported and for sources reported as "IE" (e.g. for indirect emissions from agricultural soils). In addition, correct the allocation of emissions used that is erroneously reported in the column "allocation per IPCC Guidelines".	Not resolved. The Party did not complete CRF table 9 for categories reported as "NE" or "IE". The columns titled "explanation" and "allocation as per the IPCC Guidelines" are blank.

ID#	*Issue and or problem classification*[a]	*Recommendation made in previous review report*	*ERT assessment and rationale*
G.6	National system (G.10, 2016) (G.10, 2015) Transparency	Provide information on the single national entity in the annual submission.	Resolved. Information on the single national entity is provided in the NIR (section 1.2.1). The Ministry of Agriculture, Rural Development and Environment has been assigned as the single national entity and established in line with the provisions of Article 5 of the Kyoto Protocol.
G.7	National system (G.9, 2016) (G.9, 2015) Adherence to reporting guidelines under Article 7, paragraph 1, of the Kyoto Protocol	Report on the progress of implementation of the workplan that includes the description of legal, institutional and procedural arrangements for performing the functions of the national system of Cyprus, and explain the ongoing activities put in place for continuous and sustainable reporting, including inter alia the enhancement of reporting capacity on supplementary information under the Kyoto Protocol, in particular on the LULUCF sector.	Addressing. Cyprus has not been able to demonstrate sufficient progress on the implementation of the workplan in the NIR or during the review week and therefore this issue was included in the list of potential problems and further questions raised by the ERT. The ERT notes some progress made by the Party, especially in improving the national system related to LULUCF reporting. However, only 4 out of the 16 deadlines outlined in the work plan were met. The ERT also notes the date of publication of the 2016 review report and that the actions necessary for enhancing the national system can only be implemented for the 2018 submission. After the 2017 review week, Cyprus provided an updated workplan including an updated table listing the actions and deadlines for national inventory improvement (see ID# G.22 in table 5).
G.8	AD (G.3, 2016) (G.3, 2015) (9, 2013) Completeness	Give priority to the collection of the necessary AD for the energy and industrial processes and product use sectors in order to complete the inventory.	Addressing. The ERT finds that some completeness issues have been resolved (e.g. see ID# E.12 below) and therefore that the Party is giving priority to these sectors. There are outstanding issues related to completeness, and these are included in ID#s I.1, I.6, I.7, I.10 and I.12 below.
G.9	Methods (G.15, 2016) (G.15, 2015) Transparency	Provide sufficient justification of methods, assumptions and emission parameters used in national inventory preparation, including through the provision of supporting references to literature and other information sources used.	Not resolved. EU ETS data and parameters from neighbouring countries were used in the national inventory estimates without sufficient justification (see ID#s E.1, E.6, E.7, E.10, I.2, I.4, I.5, I.13, L.1, L.5, L.12, L.13, L.14, L.16, W.1, W.4, KL.2, KL.3 and KL.4 below, where the ERT recommends further transparency improvements for specific categories).
G.10	Methods (G.15, 2016) (G.15, 2015) Accuracy	Ensure that appropriate methods are used to estimate emissions from key categories.	Addressing. The ERT finds that some issues are being addressed (e.g. see ID#s A.2 and A.5 below), but some previous recommendations have not been adequately resolved (see ID#s E.8 and E.9 below, where the ERT recommends further improvements to methods used to estimate emissions for specific key categories).
G.11	Key category analysis (G.14, 2016) (G.14, 2015) Adherence to the UNFCCC Annex I inventory reporting guidelines	Present the results of the key category analysis following the format of tables 4.2 and 4.3 from volume 1 of the 2006 IPCC Guidelines.	Resolved. Presentation of the results of the key category analysis following the format of volume 1, tables 4.2 and 4.3, of the 2006 IPCC Guidelines is not a requirement, so the previous issue is resolved. However, the ERT notes that a key category analysis was not included in the original submission (see ID# G.21 in table 5).

ID#	Issue / ind or problem classification[a]	Recommendation made in previous review report	ERT assessment and rationale
G.12	QA/QC and verification (G.1, 2016) (G.1, 2015) (table 3, 2013) Transparency	Provide more detail in the NIR on the QA/QC procedures carried out and review the inventory (sector by sector) using independent national experts after completing the inventory.	Addressing. A QA/QC and verification plan has been included in the NIR (pp.304–328). Although information on QA activities performed during international review is included in the plan, the ERT noted during the review that detailed QA/QC procedures are not provided in the 2017 submission and that this is currently under revision (see ID#s G.13 below and G.22 in table 5).
G.13	QA/QC and verification (G.13, 2016) (G.13, 2015) Adherence to the UNFCCC Annex I inventory reporting guidelines	Include the updated QA/QC and verification plan in the NIR.	Addressing. A QA/QC and verification plan has been included in the NIR, but it has not been updated as recommended by the previous ERT. During the review, Cyprus indicated that the QA/QC and verification plan is currently under revision. During the review, the Party provided to the ERT a substantially revised QA/QC programme. The revised description of the QA/QC system contains all the elements required by the 2006 IPCC Guidelines (see ID# G.22 in table 5).
G.14	Uncertainty analysis (G.6, 2016) (G.6, 2015) (table 4, 2013) Transparency	Include an uncertainty analysis for LULUCF after the LULUCF reporting has been completed.	Not resolved. The LULUCF reporting has not been completed and uncertainty is not reported for the LULUCF sector.
G.15	Uncertainty analysis (G.17, 2016) (G.17, 2015) Adherence to the UNFCCC Annex I inventory reporting guidelines	Report the uncertainty assessment with and without the LULUCF sector.	Resolved. An uncertainty assessment is reported excluding LULUCF only (see NIR, annex I). Although the uncertainty analysis for LULUCF was not included, the ERT is closing this issue to avoid duplication of issues in the report (see outstanding issue ID# G.14 above).
G.16	Uncertainty analysis (G.17, 2016) (G.17, 2015) Adherence to the UNFCCC Annex I inventory reporting guidelines	Undertake quantitative uncertainty assessments for each category of the national inventory and report the results in the NIR.	Not resolved. A quantitative uncertainty assessment for each category of the national inventory has not been performed. Furthermore, overall the uncertainty assessment was not updated for the latest annual submission.
G.17	Archiving (G.18, 2016) (G.18, 2015) Adherence to the UNFCCC Annex I inventory reporting guidelines	Enhance the security and performance of the data archiving and storage system.	Not resolved. Based on information provided in the Party's national inventory improvement plan, the improvement of the archiving system is scheduled to start in 2018 and will be completed in 2020.
G.18	National registry (G.19, 2016) (G.19, 2015) Adherence to reporting guidelines under Article 7, paragraph 1, of the Kyoto Protocol	Include in the NIR information on the national registry in accordance with decision 5/CMP.1 and the annex to decision 13/CMP.1 in conjunction with decision 3/CMP.11 and other relevant provisions and standards (the submission did not include	Addressing. Additional information was not provided in the NIR regarding these specific functions of the national registry. However, during the review, Cyprus informed the ERT that the necessary infrastructure to connect Cyprus' registry to the ITL was installed and tested successfully with the ITL in 2016 (see ID# G.23 in table 5).

ID[a]	Issue and or problem classification[a]	Recommendation made in previous review report	ERT assessment and rationale
		contact information for a designated organization and registry administrator, or a description of the standardized electronic database applied for registry performance and publicly accessible information).	
G.19	Kyoto Protocol units (G.20, 2016) (G.20, 2015) Adherence to reporting guidelines under Article 7, paragraph 1, of the Kyoto Protocol	Report the SEF tables in accordance with decision 15/CMP.1, annex, paragraphs 12–17, in conjunction with decision 3/CMP.11, and annex II to decision 3/CMP.11.	Resolved. The SEF tables have not been included in the original submission; however, the Party was able to submit SEF tables filled with the notation key "NO" before the review week (on 5 September 2017).
G.20	Article 3, paragraph 14, of the Kyoto Protocol (G.21, 2016) (G.21, 2015) Adherence to reporting guidelines under Article 7, paragraph 1, of the Kyoto Protocol	Provide in the NIR all supplementary information under Article 7, paragraph 1, of the Kyoto Protocol, in particular the information related to Article 3, paragraph 14, in accordance with decision 15/CMP.1.	Addressing. Information related to Article 3, paragraph 14, of the Kyoto Protocol was included in the NIR (chapter 11); however, changes to this information were not reported. During the review, Cyprus confirmed that there were no changes to report.
Energy			
E.1	1. General (energy sector) – all fuels – CO_2, CH_4 and N_2O (E.1, 2016) (E.1, 2015) (18, 2013) Transparency	Provide information on how emissions are estimated by including information on efforts to reconcile energy balance and EU ETS data, as well as additional information on the use of EU ETS data and an explanation of how the time-series consistency of the emission estimates is ensured.	Not resolved. The information has not been included in the NIR. During the review, the Party reported that this is a work in progress.
E.2	1.A.1.a Public electricity and heat production – all fuels – CO_2, CH_4 and N_2O (E.8, 2016) (E.8, 2015) (30, 2013) Consistency	Use country- and/or plant-specific EFs for the earlier years in the time series, when available.	Addressing. Cyprus uses country-specific EFs based on the 2005 IEF to estimate emissions for earlier years. However, the 2005 CO_2 IEF for HFO (76.67 t/TJ calculated from table 3.13 in the NIR) is significantly lower than the IEFs over the period 2006–2015, and is also below the IPCC default of 77.4 t/TJ for HFO. An explanation and/or justification has not been included in the NIR.
E.3	1.A.1.a Public electricity and heat production – liquid fuels – CO_2 (E.10, 2016) (E.10, 2015) (32, 2013) Consistency	Investigate and explain the reasons behind the fluctuation in CO_2 IEFs after 2005.	Addressing. The Party has now included in the NIR the mix of fuel used and the emissions from each fuel (table 3.13). It is the ERT's view that the fluctuation is mainly due to the IEF of HFO (see ID# E.2 above); however, this has not been explained in the NIR.

ID#	*Issue and or problem classification*[a]	*Recommendation made in previous review report*	*ERT assessment and rationale*
E.4	1.A.2.f Non-metallic minerals – all fuels – CO_2, CH_4 and N_2O (E.8, 2016) (E.8, 2015) (30, 2013) Consistency	Use country- and/or plant-specific EFs for the earlier years in the time series, when available.	Resolved. Cyprus uses country-specific EFs based on the 2005 EU ETS data to estimate emissions for earlier years.
E.5	1.A.3.a Domestic aviation – liquid fuels – CO_2, CH_4 and N_2O (E.20, 2016) (E.20, 2015) Accuracy	Make efforts to collect data to enable the application of higher-tier methods and improve the consistency of the time series.	Addressing. During the review, the Party reported that this is a work in progress. More specific recommendations related to the use of higher-tier methods and consistency for domestic aviation are given in ID#s E.6 below and E.20 in table 5.
E.6	1.A.3.a Domestic aviation – liquid fuels – CO_2, CH_4 and N_2O (E.20, 2016) (E.20, 2015) Transparency	Report in the NIR on any progress achieved in applying higher-tier methods and improving the consistency of the time series.	Not resolved. Progress has not been reported in the NIR.
E.7	1.A.3.b Road transportation – liquid fuels – CO_2, CH_4 and N_2O (E.22, 2016) (E.22, 2015) Transparency	Provide in the NIR a description of the composition of the biofuels used in the category 1.A.3.b, that is the composition of the biodiesel being mixed to the diesel (in per cent), information explaining if all diesel is mixed with biodiesel and if there are other types of biofuels being used in the country or in road transportation.	Not resolved. The information has not been included in the NIR.
E.8	1.A.3.b.i Cars – liquid fuels – CO_2, CH_4 and N_2O (E.19, 2016) (E.19, 2015) Accuracy	Make efforts to apply higher-tier methods to estimate emissions for category 1.A.3.b.i.	Not resolved. Tier 1 is still used and no update has been reported in the NIR. During the review, the Party reported that this is a work in progress.
E.9	1.A.3.d Domestic navigation – liquid fuels – CO_2, CH_4 and N_2O (E.21, 2016) (E.21, 2015) Accuracy	Make efforts to collect data to enable the application of higher-tier methods and improve the consistency of the time series.	Not resolved. Progress has not been reported on efforts to collect data. During the review, the Party reported that this is a work in progress.
E.10	1.A.3.d Domestic navigation – liquid fuels – CO_2, CH_4 and N_2O (E.21, 2016) (E.21, 2015) Transparency	Report in the NIR on any progress achieved in applying higher-tier methods and improving the consistency of the time series.	Not resolved. The NIR does not report progress in applying higher-tier methods. During the review, the Party reported that no progress has been achieved.
E.11	1.A.4.b Residential – biomass – CH_4 and	Correct the inconsistency between the information on	Resolved. In the NIR (table 3.25; formerly table 3.22) charcoal is reported in kt and solid biofuels

ID#	Issue and or problem classification[a]	Recommendation made in previous review report	ERT assessment and rationale
	N_2O (E.15, 2016) (E.15, 2015) (39, 2013) Adherence to the UNFCCC Annex I inventory reporting guidelines	solid biomass consumption for the residential sector for 2011 reported in table 3.22 of the NIR (2,300.00 TJ) and that in the CRF tables (229.99 TJ).	in TJ. Charcoal is a solid biofuel, but it has not been included with solid biofuels in table 3.25. The ERT recognizes that there is no inconsistency, but notes that further confusion would be avoided by clearly indicating that solid biofuels in NIR table 3.25 do not include charcoal, and by the consistent use of energy units (TJ).
E.12	1.A.4 Other sectors – biomass – CH_4 and N_2O (E.16, 2016) (E.16, 2015) (40, 2013) Consistency	Investigate the definition and boundaries of the AD and implement a QA/QC procedure to ensure time-series consistency considering that biomass consumption in 2011 (339.49 TJ) is three times higher than the average of the previous years (121.8 TJ for 2006–2010).	Resolved. The time series has been revised and consumption in 2011 (300.00 TJ) is in line with the average of the previous years (278.9 TJ for 2006–2010).
IPPU			
I.1	2. General (IPPU) (I.1, 2016) (I.1, 2015) (43, 2013) Completeness	Conduct the improvement plan to significantly increase the number of categories reported and report emissions for those categories.	Addressing. Cyprus has not increased the number of categories reported on, in the 2017 submission, compared with that of the 2016 submission. However, the Party has demonstrated progress with data collection for category 2.F product uses as substitutes for ODS (see ID#s I.10 and I.12 below).
I.2	2.A.1 Cement production – CO_2 (I.10, 2016) (I.10, 2015) Transparency	Update the description of the methodology used to calculate CO_2 emissions from category 2.A.1 in the NIR.	Not resolved. The description of the methodology used to calculate CO_2 emissions was not updated in the 2017 NIR.
I.3	2.A.3 Glass production – CO_2 (I.11, 2016) (I.11, 2015) Transparency	Report estimates of CO_2 emissions from glass production.	Addressing. This information was not provided in the NIR (section 4.2); however, during the review Cyprus indicated that glass production does not take place in the country and that the information provided by the Statistical Service of Cyprus refers only to shaping and processing. The NIR (table 4.3) and CRF table2(I).A-Hs1 consistently report these emissions as "NO".
I.4	2.A.4 Other process uses of carbonates – CO_2 (I.12, 2016) (I.12, 2015) Transparency	Describe in the NIR the methodology used to calculate CO_2 emissions from category 2.A.4.a.	Not resolved. The description of the methodology used to calculate CO_2 emissions from category 2.A.4.a (ceramics) was not updated in the 2017 NIR.
I.5	2.A.4 Other process uses of carbonates – CO_2 (I.13, 2016) (I.13, 2015) Transparency	Describe in the NIR the methodology used to calculate CO_2 emissions from category 2.A.4.b.	Not resolved. The description of the methodology used to calculate CO_2 emissions from category 2.A.4.b (other uses of soda ash) was not updated in the 2017 NIR.
I.6	2.B.5 Carbide production – CO_2	Further investigate if acetylene production in Cyprus is based	Not resolved. There is no evidence of this work in the "source-specific planned improvement for

ID#	Issue and/or problem classification[a]	Recommendation made in previous review report	ERT assessment and rationale
	(I.14, 2016) (I.14, 2015) Completeness	on calcium carbide use and, depending on the results of the investigation, report estimates of CO_2 emissions from calcium carbide used in acetylene production or revise the use of the notation key (i.e. NO").	chemical industry" section of the 2017 NIR. During the review, the Party stated that work with the Statistical Service of Cyprus and the Customs Office to collect information on the users of calcium carbide is in progress.
I.7	2.D.1 Lubricant use – CO_2 (I.15, 2016) (I.15, 2015) Completeness	Use one of the splicing techniques (i.e. overlap and/or surrogate data) available in the 2006 IPCC Guidelines to fill the gap in the AD for the years 1990–1993 and report CO_2 emission estimates from lubricant use.	Addressing. For the 2017 submission, the Party collected AD and reported emissions for 1993 but AD and emissions for 1990–1992 are still reported as "NO" in CRF table 2(I).A-H.
I.8	2.D.2 Paraffin wax use – CO_2 (I.16, 2016) (I.16, 2015) Transparency	Describe in the NIR the methodology used to calculate CO_2 emissions from category 2.D.2.	Resolved. Cyprus included in a new section in the NIR (section 4.3.2, p.116) a complete description of the methodology used to calculate CO_2 emissions from this category.
I.9	2.D.3 Other (non-energy products from fuels and solvent use) – CO_2 (I.17, 2016) (I.17, 2015) Adherence to the UNFCCC Annex I inventory reporting guidelines	Report the AD for urea-based catalysts in kt, instead of TJ, in CRF table 2(I).A-Hs2.	Not resolved. Cyprus is still reporting the AD for urea-based catalysts in kt.
I.10	2.F Product uses as substitutes for ODS – HFCs (I.18, 2016) (I.18, 2015) Accuracy	Continue efforts to collect AD and report emissions fully in accordance with the 2006 IPCC Guidelines.	Addressing. During the review, the Party indicated that the work is in progress; however, there is no evidence of this work in the NIR (section 2.5.6). During the review, the Party also indicated that information has been collected for Nicosia and Limassol, and that additional budget for 2018 is pending approval to enable it to collect data and report on Larnaca, Ammochostos and Pafos. According to Cyprus, it will be in a position to provide estimates based on the 2006 IPCC Guidelines for the 2020 submission (see ID#s I.21 and I.22 in table 5).
I.11	2.F Product uses as substitutes for ODS – PFCs and NF_3 (I.19, 2016) (I.19, 2015) Transparency	Further examine whether PFC and NF_3 emissions from category 2.F (product uses as substitutes for ODS) occur in the country and, as appropriate, report estimates or use an appropriate notation key (i.e. "NO") in the corresponding CRF tables.	Addressing. The occurrence of PFC and NF_3 emissions from category 2.F is not described in the NIR (section 4.5) and CRF table 2(II)B-Hs2 provides no further information (it only reports emissions from an unspecified mix of HFCs). During the review, Cyprus stated that it has confirmed that PFC and NF_3 emissions do not occur and that "NO" has not been reported because the nodes do not exist in CRF Reporter. The ERT notes that, upon adding the respective gas in CRF Reporter, the notation key "NO" could be added.

ID[a]	*Issue and/or problem classification[b]*	*Recommendation made in previous review report*	*ERT assessment and rationale*
I.12	2.F.1 Refrigeration and air conditioning – HFCs (I.4, 2016) (I.4, 2015) (46, 2013) Completeness	Further examine whether emissions from manufacturing of refrigeration and air-conditioning equipment occur in the country and, as appropriate, report values or revise the use of the notation keys reported.	Addressing. Cyprus did not include any progress on this issue in the 2017 NIR and is still reporting "NO" for manufacturing emissions in CRF table 2(II) B-Hs2. The previous ERT had noted that there are data for manufacture of non-domestic cooling and ventilation equipment (air conditioning equipment, commercial refrigerators and commercial freezers) in a 2014 publication from the Statistical Service of Cyprus; however, these data are not yet used because data are not available for all applications. During the 2017 review, Cyprus indicated that information has been collected for Nicosia and Limassol, and that additional budget for 2018 was pending approval for Larnaca, Ammochostos and Pafos. According to Cyprus, it will be in position to provide estimates based on the 2006 IPCC Guidelines for the 2020 submission.
I.13	2.G.1 Electrical equipment – SF_6 (I.20, 2016) (I.20, 2015) Transparency	Explain in the NIR how SF_6 emissions from electrical equipment are estimated.	Not resolved. The description of the methodology used to calculate SF_6 emissions from category 2.G.1 was not updated in the NIR 2017.
I.14	2.G.4 Other (other product manufacture and use) – CO_2 (I.21, 2016) (I.21, 2015) Accuracy	Revise the CO_2 emission estimates using the default value for the fossil carbon content fraction of NMVOC emissions available in the 2006 IPCC Guidelines and report them separately for tobacco combustion and fireworks.	Resolved. In the NIR (section 4.2.3, pp.116 and 117) Cyprus presented CO_2 emission estimates for category 2.G.4 using the correct, default value for the fossil carbon content of NMVOC emissions from the 2006 IPCC Guidelines.
I.15	2.G.4 Other (other product manufacture and use) – CH_4 and N_2O (I.22, 2016) (I.22, 2015) Comparability	Further examine whether CH_4 and N_2O emissions from tobacco combustion and fireworks (reported under category 2.G.4 other (other product manufacture and use)) occur in the country and, as appropriate, report estimates or revise the use of the notation key (i.e. "NO").	Resolved. The 2006 IPCC Guidelines do not provide a method for estimating CH_4 and N_2O emissions from other product manufacture and use.
Agriculture			
A.1	3. General (agriculture) (A.1, 2016) (A.1, 2015) (56, 2013) Transparency	Improve the reporting in the NIR by including information on the methods, EFs and AD used across the sector.	Resolved. Cyprus has reported the methodology used to estimate emissions, including information on EFs and AD, for categories 3.A (section 5.2.2, p.133), 3.B (section 5.3.2, p.139), 3.D (section 5.5.2, p.147), 3.F (section 5.7.2, p.152) and 3.H (section 5.9.2, p.154).
A.2	3. General (agriculture) (A.3, 2016) (A.3, 2015) (56, 2013) Accuracy	Apply higher-tier methods and collect country-specific data for all key categories.	Addressing. Cyprus used a tier 2 methodology to estimate CH_4 emissions from enteric fermentation for dairy cattle, but it continues to use a tier 1 method for other key animal categories (see ID#s A.5 below and A.10 and A.11 in table 5). The ERT noted that national circumstances (e.g. personnel and financial

ID[a]	Issue and or problem classification[b]	Recommendation made in previous review report	ERT assessment and rationale
			constraints) prevent Cyprus from making further improvements in this area.
A.3	3. General (agriculture) – CH_4 and N_2O (A.17, 2016) (A.17, 2015) Transparency	Describe the methodology used to calculate emissions from categories 3.A, 3.B and 3.D in the NIR.	Resolved. The methodologies used to calculate emissions are included in the NIR for categories 3.A (section 5.2.2, p.133) and 3.B (section 5.3.2, p.139) and for 3.D (section 5.5.2, p.147) and 3.B.2 (p.140), associated with organic N sources.
A.4	3. General (agriculture) – CH_4 and N_2O (A.17, 2016) (A.17, 2015) Transparency	Update table 5.2 of the NIR using the correct notation key.	Resolved. NIR table 5.2 correctly reflects the methodologies used by the Party to estimate GHG emissions from agriculture.
A.5	3.A Enteric fermentation – CH_4 (A.6, 2016) (A.6, 2015) (60, 2013) Accuracy	Estimate emissions for all significant livestock categories using an enhanced livestock characterization and a tier 2 methodology in accordance with the IPCC good practice guidance.	Addressing. The Party has used a tier 2 methodology to estimate CH_4 emissions from enteric fermentation for dairy cattle, but it continues to use tier 1 to estimate CH_4 emissions from non-dairy cattle and sheep, which are also significant animal categories.
A.6	3.F Field burning of agricultural residues – CH_4 and N_2O (A.2, 2016) (A.2, 2015) (56, 2013) Transparency	Provide a description of, and justification for, the fraction of agricultural residues actually burned in fields.	Resolved. Cyprus has explained in the NIR (section 5.7.2, p.152) that the fraction of wheat residues burned in fields is estimated using the IPCC default value from the IPCC 2006 Guidelines (table 5.27).
A.7	3.F Field burning of agricultural residues – CH_4 and N_2O (A.16, 2016) (A.16, 2015) (70, 2013) Transparency	Provide the relevant justification for (e.g. expert judgment) and supporting documentation on the assumption that 100 per cent of residues were burned on site in 1990 and that this decreased gradually to 10 per cent until 2008 and later years.	Resolved. Cyprus explained in the NIR (section 5.7.2, p.152) that this assumption is based on the field burning status in 1990 and the implementation of a ban on crop residue burning from 2003 onward.
LULUCF			
L.1	4. General (LULUCF) (L.1, 2016) (L.1, 2015) (73, 2013) Transparency	Specify in the NIR and the CRF tables which type of land conversions to forest land are included.	Not resolved. Relevant information was not provided in the NIR (section 6.2.3.1, p.158). Although information on land conversions is reported in CRF table 4.1, these conversions are not reflected in CRF tables 4.A–4.F.
L.2	4. General (LULUCF) (L.2, 2016) (L.2, 2015) (73, 2013) Comparability	Classify the land areas in accordance with the six land-use categories.	Addressing. The Party presents AD for the six broad land-use categories in the NIR (section 6.1, table 6.1), but areas are not provided in CRF tables 4.D–4.F. Cyprus also presents in CRF table 4.1 a complete matrix with areas and changes in areas for all six categories.
L.3	4. General (LULUCF) (L.3, 2016) (L.3, 2015) (74, 2013) Accuracy	Report the areas converted to a different land use under the relevant land-use conversion category for 20 consecutive years before reporting them	Not resolved. The Party did not report information and estimates for any land conversion to other land. The NIR (p.163) indicates that land converted to forest land is included under forest land remaining forest land

ID[a]	Issue and or problem classification[b]	Recommendation made in previous review report	ERT assessment and rationale
		under the corresponding land remaining category.	but does not clarify if the 20-year transition period has been used.
L.4	4. General (LULUCF) (L.4, 2016) (L.4, 2015) (75, 2013) Transparency	Provide information on managed and unmanaged land in the NIR and specify each land category as, for example, forest land remaining forest land and land converted to forest land.	Addressing. The Party provided the relevant information in the NIR (section 6.3, p.163), indicating that all forest land is managed. However, the ERT is of the view that Cyprus should have reported related information on the other land-use categories (see the rationale in ID# L.9 below). In CRF table 4.A, aggregate estimates are reported for forest land remaining forest land and land converted to forest land.
L.5	4. General (LULUCF) (L.5, 2016) (L.5, 2015) (76, 2013) Transparency	Provide information on the approaches used for the consistent representation of land areas, including definitions and the classification system.	Not resolved. The Party provided the overall approach to identifying land area and area changes in the NIR (section 6.2.3.1) but provided a definition only for forest land (see ID# L.17 in table 5).
L.6	4. General (LULUCF) – CO_2 (L.7, 2016) (L.7, 2015) (78, 2013) Accuracy	Explore the use of, where relevant, the carbon stock change factors and assumptions used for the estimation of the carbon stock changes in biomass, dead wood and litter, and ensure comparability between the land-use changes both to and from a category.	Not resolved. The Party reported only the subcategory forest land remaining forest land and includes land converted to forest land in forest land remaining forest land (NIR section 6.3.1). No other land-use conversions are reported in CRF tables 4.A–4.E, although conversion areas are included in CRF table 4.1.
L.7	4. General (LULUCF) – CO_2, CH_4 and N_2O (L.8, 2016) (L.8, 2015) (79, 2013) Comparability	Report "NO" for any category, pool and/or gas for which there is information confirming that it does not occur, and provide such information in the NIR, and report "NE" for categories, pools and/or gases for which there is no information on emissions/removals or for which net emissions/removals are negligible.	Addressing. The Party improved the use of notation keys, including by using mostly "NE" for the pools for which there is no information on emissions/removals (e.g. CRF tables 4.B, 4.C, 4.D and 4.F). The ERT notes that CRF table 4.E is blank. Cyprus also provided correct information in the NIR related to the notation key "NO"; however, some revisions are still necessary in the application of the notation key "NO" for the categories mentioned in ID# L.9 below.
L.8	4. General (LULUCF) – CO_2 (L.9, 2016) (L.9, 2015) (79, 2013) Completeness	Do not leave any cells blank in the CRF tables (e.g. for land converted to forest land in CRF table 4.A), thereby ensuring that either an estimate or a notation key is reported in all cells.	Not resolved. In CRF table 4.E for example, the Party did not provide an estimate or a notation key for the entire table.
L.9	4. General (LULUCF) – CO_2, CH_4 and N_2O (L.10, 2016) (L.10, 2015) (79, 2013) Completeness	Report all of the mandatory carbon pools.	Not resolved. The Party did not report carbon stock changes for several land-use conversions and/or pools, including for cropland, grassland, settlements, wetlands and other land. Even for forest land remaining forest land, the Party used the notation key "NO" for the following carbon pools: litter, dead wood and soil organic carbon in CRF table 4.A. This reporting is not consistent with the fact that the subcategory includes land converted to forest land. During the previous review, Cyprus acknowledged that LULUCF is the most incomplete sector of the national inventory and indicated that the present system

ID[a]	Issue and or problem classification[a]	Recommendation made in previous review report	ERT assessment and rationale
			for data collection does not allow for the complete reporting of emissions and removals. Therefore, Cyprus reports only on the net emissions from forest land remaining forest land and emissions from wildfires. The ERT noted that Cyprus could use default EFs from the 2006 IPCC Guidelines to provide estimates for all land-use categories, in the absence of country-specific data.
L.10	4. General (LULUCF) CO_2,CH_4 and N_2O (L.12, 2016) (L.12, 2015) (81, 2013) Completeness	Provide the missing estimates of emissions from forest fires for land converted to forest land for 2011.	Not resolved. Cyprus does not report emissions from fires in land converted to forest land in CRF table 4(V), indicating that all reporting is under forest land remaining forest land (NIR section 6.3.1). During the review, the Party indicated that implementing this recommendation was a work in progress with no identified timetable.
L.11	4. General (LULUCF) (L.13, 2016) (L.13, 2015) (82, 2013) Completeness	Include information in the NIR and the CRF tables on the missing carbon pools and data.	Addressing. The ERT noted that some carbon pools continue not to be reported. The ERT notes that other recommendations remain unresolved (see ID#s L.8 and L.9 above).
L.12	4. General (LULUCF) (L.18, 2016) (L.18, 2015) Transparency	Provide information in the NIR on managed/unmanaged land in the grassland and wetlands categories.	Not resolved. Relevant information was not provided in the NIR.
L.13	4.A Forest land (L.18, 2016) (L.18, 2015) Transparency	Explain in the NIR the reason for reporting unmanaged forest land in CRF table 4.1, which conflicts with the information in the NIR that all forest land is considered to be managed.	Not resolved. Cyprus indicated during the review that the areas that are not under the effective control of the Republic of Cyprus were considered to be unmanaged, and emissions were not reported for these areas. Cyprus indicated that it is considering how to revise this assumption for the 2018 submission.
L.14	4.A Forest land (L.17, 2016) (L.17, 2015) Transparency	Provide a description of the methodology and assumptions used to identify the forest area.	Not resolved. The reported total land areas refer to the entire island, while the emissions from forest land remaining forest land are reported only for the government-controlled areas (NIR, p.163). However, there is no information in the NIR on how these areas have been estimated.
L.15	4.A Forest land (L.19, 2016) (L.19, 2015) Accuracy	Clearly separate land under forest land remaining forest land and areas of land converted to forest land, applying the appropriate EFs. In the absence of country-specific values, use the appropriate default values from the 2006 IPCC Guidelines.	Not resolved. Cyprus includes estimates of net emissions for land converted to forest land under the single land-use category reported (i.e. forest land remaining forest land). During the review, the Party indicated that the implementation of this recommendation was a work in progress with no identified timetable.
L.16	4(V) Biomass burning (L.21, 2016) (L.21, 2015) Transparency	Clarify in the NIR that the CO_2 emissions from wildfires as reported in CRF table 4(V) are discounted from the CO_2 emissions reported in CRF table 4.A and therefore double counting does not occur.	Not resolved. The previous review report indicated that the CO_2 emissions reported in CRF table 4(V) are subtracted from the CO_2 emissions reported in CRF table 4.A, but this has not been reported in the NIR.

ID[a]	Issue and or problem classification[a]	Recommendation made in previous review report	ERT assessment and rationale
Waste			
W.1	5.D Wastewater treatment and discharge – CH_4 and N_2O (W.7, 2016) (W.7, 2015) (93, 2013) Transparency	Provide detailed information on the type of handling system used for the treatment of wastewater and sludge as well as the methodology used for the estimation of emissions.	Not resolved. In its NIR the Party does not characterize all wastewater according to the percentages flowing to different treatment systems (aerobic and anaerobic) and the percentage of untreated wastewater. The Party is still not accounting for sludge removal even though sludge is reported in category 3.D.a.2.b (e.g. 163,611.00 kg N for 2015).
W.2	5.D Wastewater treatment and discharge – CH_4 and N_2O (W.12, 2016) (W.12, 2015) Transparency	Improve the assessment of the information related to the types of infrastructure, technologies and volume of wastewater treated, considering national circumstances, and report this information transparently in the NIR.	Addressing. The Party presented (in NIR table 7.21) the types and capacities of technologies used for domestic wastewater treatment. However, the NIR does not characterize all wastewater according to the percentages flowing into different treatment systems and the percentage of untreated wastewater.
W.3	5.D Wastewater treatment and discharge – CH_4 (W.11, 2016) (W.11, 2015) Accuracy	Further enhance the use of country-specific data to support the choice of MCF values in order to better represent the types of activities that have been implemented by the industrial sector to process and dispose of all the wastewater generated, including in domestic municipal wastewater treatment plants.	Not resolved. The Party used an MCF value of 0.3 instead of 0 (0 was used in the previous submission), both of which are IPCC defaults, because the system was identified to be not well managed and overloaded. The Party reported that this change has been made until sufficient information is available from country-specific studies to improve the accuracy of the MCF and for the use of country-specific data for the wastewater treatment plants in Cyprus.
W.4	5.D Wastewater treatment and discharge – CH_4 (W.13, 2016) (W.13, 2015) Transparency	Describe in the NIR the reasons and the evolution of national circumstances that were considered to support the decision to change the "waste disposal in septic tanks" correction factor from 1.25 to 1.0.	Resolved. The ERT noted that the Party discussed in its NIR (p.190) that it has considered this additional wastewater to be uncollected, justifying the use of a value of 1.0 for the correction factor.
KP-LULUCF			
KL.1	General (KP-LULUCF) (KL.1, 2016) (KL.1, 2015) Completeness	Implement the workplan designed to report any emissions/removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, including: application of method 2 from the Kyoto Protocol Supplement to address information on geographical location; completion by 2018 of a map of woody forest vegetation in state and private forests, with a minimum mapping unit of 0.3 ha; acquire or utilize satellite information to obtain the areas of AD for forest management and the geographic location;	Not resolved. Emissions and removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol are reported as "NO", "NE" or "IE". Additional information has not been provided in the NIR. Cyprus indicated that work is in progress and the information will be included in the 2018 submission.

ID[a]	*Issue and or problem classification[a]*	*Recommendation made in previous review report*	*ERT assessment and rationale*
		and acquire capacity-building assistance to estimate non-CO_2 emissions).	
KL.2	General (KP-LULUCF) (KL.1, 2016) (KL.1, 2015) Transparency	Report on the progress of the implementation of the workplan designed to report any emissions/removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol.	Not resolved. Additional information has not been provided in the NIR. Cyprus indicated that work is in progress and the information will be submitted in the 2018 NIR.
KL.3	General (KP-LULUCF) (KL.2, 2016) (KL.2, 2015) Transparency	Clarify in the NIR how the losses of carbon stock calculated using the IPCC default biomass gain-loss method have been calculated and what types of losses have been considered.	Not resolved. Although country-specific data from the Department of Forests are available and were provided to the ERT during the 2016 review, there is no transparent information in the 2017 NIR on how the losses have been calculated and what types of losses have been considered.
KL.4	General (KP-LULUCF) (KL.3, 2016) (KL.3, 2015) Transparency	Include estimates of the background level and margin in the 2017 submission.	Not resolved. Cyprus states in the NIR that it intends to apply the provisions for natural disturbances for FM, but the background level and margin are not estimated. During the review, Cyprus indicated that it intends to provide this information in the 2018 submission.

[a] References in parentheses are to the paragraph(s) and the year(s) of the previous review report(s) where the issue and/or problem was raised. Issues are identified in accordance with paragraphs 80–83 of the UNFCCC review guidelines and classified as per paragraph 81 of the same guidelines. Problems are identified and classified as problems of transparency, accuracy, consistency, completeness or comparability in accordance with paragraph 69 of the Article 8 review guidelines, in conjunction with decision 4/CMP.11. In addition, Cyprus was not subject to an individual inventory review in 2014. Therefore, 2014 is excluded from this column.

IV. Issues identified in three successive reviews and not addressed by the Party

8. In accordance with paragraph 83 of the UNFCCC review guidelines, the ERT noted that the issues included in table 4 have been identified in three successive reviews, including the review of the 2017 annual submission of Cyprus, and have not been addressed by the Party.

Table 4
Issues identified in three successive reviews and not addressed by Cyprus

ID[a]	*Previous recommendation for the issue identified*	*Number of successive reviews issue not addressed[a]*
General		
G.1	Improve the transparency of reporting on all sectors	3 (2013–2017)
G.3	Include the relevant ministries and agencies in the institutional arrangements for inventory preparation in order to make reporting on LULUCF possible	3 (2013–2017)
G.4	Report notation keys in the CRF tables instead of leaving cells blank and/or reporting zeros	3 (2013–2017)
G.5	Provide relevant explanations in CRF table 9(a), specifically for all cases of the notation key "NE" being reported and for sources reported as "IE" (e.g.	3 (2013–2017)

ID[a]	Previous recommendation for the issue identified	Number of successive reviews issue not addressed[b]
	for indirect emissions from agricultural soils). In addition, correct the allocation of emissions used that is erroneously reported in the column "allocation per IPCC Guidelines"	
G.8	Give priority to the collection of the necessary AD for the energy and industrial processes and product use sectors in order to complete the inventory	3 (2013–2017)
G.12	Provide more detail in the NIR on the QA/QC procedures carried out and review the inventory (sector by sector) using independent national experts after completing the inventory	3 (2013–2017)
G.14	Include an uncertainty analysis for LULUCF after the LULUCF reporting has been completed	3 (2013–2017)
Energy		
E.1	Provide information on how emissions are estimated by including information on efforts to reconcile energy balance and EU ETS data, as well as additional information on the use of EU ETS data and an explanation of how the time-series consistency of the emission estimates is ensured	3 (2013–2017)
E.2	Use country- and/or plant-specific EFs for the earlier years in the time series, when available	3 (2013–2017)
E.3	Investigate and explain the reasons behind the fluctuation in CO_2 IEFs after 2005	3 (2013–2017)
IPPU		
I.1	Conduct the improvement plan to significantly increase the number of categories reported and report emissions for those categories	3 (2013–2017)
I.12	Further examine whether emissions from manufacturing of refrigeration and air conditioning equipment occur in the country and, as appropriate, report values or revise the use of the notation keys reported	3 (2013–2017)
Agriculture		
A.2	Apply higher-tier methods and collect country-specific data for all key categories	3 (2013–2017)
A.5	Estimate emissions for all significant livestock categories using an enhanced livestock characterization and a tier 2 methodology in accordance with the IPCC good practice guidance	3 (2013–2017)
LULUCF		
L.1	Specify in the NIR and the CRF tables which type of land conversions to forest land are included	3 (2013–2017)
L.2	Classify the land areas in accordance with the six land-use categories	3 (2013–2017)
L.3	Report the areas converted to a different land use under the relevant land-use conversion category for 20 consecutive years before reporting them under the corresponding land remaining category	3 (2013–2017)
L.4	Provide information on managed and unmanaged land in the NIR and specify each land category as, for example, forest land remaining forest land and land converted to forest land	3 (2013–2017)
L.5	Provide information on the approaches used for the consistent representation of land areas, including definitions and the classification system	3 (2013–2017)

ID[a]	*Previous recommendation for the issue identified*	*Number of successive reviews issue not addressed*[b]
L.6	Explore the use of, where relevant, the carbon stock change factors and assumptions used for the estimation of the carbon stock changes in biomass, dead wood and litter, and ensure comparability between the land-use changes both to and from a category	3 (2013–2017)
L.7	Report "NO" for any category, pool and/or gas for which there is information confirming that it does not occur, and provide such information in the NIR, and report "NE" for categories, pools and/or gases for which there is no information on emissions/removals or for which net emissions/removals are negligible	3 (2013–2017)
L.8	Do not leave any cells blank in the CRF tables (e.g. for land converted to forest land in CRF table 5.A), thereby ensuring that either an estimate or a notation key is reported in all cells	3 (2013–2017)
L.9	Report all of the mandatory carbon pools	3 (2013–2017)
L.10	Provide the missing estimates of emissions from forest fires for land converted to forest land for 2011	3 (2013–2017)
L.11	Include information in the NIR and the CRF tables on the missing carbon pools and data	3 (2013–2017)
Waste		
W.1	Provide detailed information on the type of handling system used for the treatment of wastewater and sludge as well as the methodology used for the estimation of emissions	3 (2013–2017)
KP-LULUCF		
	No such issues for KP-LULUCF activities were identified	

[a] The review of the 2016 annual submission was held in conjunction with the review of the 2015 annual submission. Since the reviews of the 2015 and 2016 annual submissions were not successive reviews, but were held in conjunction, for the purpose of counting successive years in table 4, 2015/2016 were considered as one year. In addition, Cyprus was also not subject to an individual inventory review in 2014. Therefore, 2014 is excluded from this table.

V. Additional findings made during the 2017 individual inventory review

9. Table 5 contains findings made by the ERT during the individual review of the 2017 annual submission of Cyprus that are additional to those identified in table 3.

Table 5
Additional findings made during the 2017 individual review of the annual submission of Cyprus

ID#	*Finding classification*	*Description of the finding with recommendation or encouragement*	*Is finding an issue and/or a problem?[a] If yes, classify by type*
General			
G.21	Key category analysis	The ERT noted that the key category analysis tables were not included in the original submission. During the review, the Party provided the key category analysis, but it was not in line with the 2006 IPCC Guidelines because the cut-off criterion used in the key category analysis was incorrect (the category that results in cumulative emissions of over 95 per cent should be included as a key category) and the aggregation level of categories was not fully in line with the 2006 IPCC Guidelines (table 4.1); specifically, the guidelines suggest disaggregating to main fuel types emissions from fuel combustion activities in the energy sector, and assessing direct and indirect emissions from agricultural soils separately. The ERT recommends that Cyprus correct the cut-off criterion to use a 95 per cent threshold and disaggregate emissions in the energy sector and in the agricultural soils categories in the key category analysis.	Yes. Adherence to the UNFCCC Annex I inventory reporting guidelines
G.22	National system	The ERT noted that in the 2017 NIR, and in response to questions raised by the ERT during the review, Cyprus has not been able to demonstrate sufficient progress in the implementation of the workplan prepared in response to the 2016 review (see ID# G.7 in table 3). The ERT noted several pending potential problems related to the functions of the national system of Cyprus: (a) A legal framework had not yet been formally established in Cyprus to define the roles and responsibilities of specific ministries, agencies and other entities in relation to timely data provision and national GHG inventory preparation as outlined in paragraphs 10(a) and 12(c) of the annex to decision 19/CMP.1 in conjunction with decision 3/CMP.11. During the 2017 review, Cyprus informed the ERT that to establish the necessary legal framework and the institutional arrangements for the preparation of the national GHG emissions inventory, the Ministry of Agriculture, Rural Development and Environment has decided to proceed with a Council of Ministers decision. The draft proposal was sent for comments to the ministries and departments involved on 1 November 2016 with a deadline for comments of 15 November 2016. A revised proposal was sent to involved entities in September 2017. At the time of the review week, Cyprus indicated that it is anticipated that the decision would be taken by the Council of Ministers by the end of 2017 and be completed prior to the 2018 submission. The ERT notes that the decision was subsequently adopted by the Council of Ministers on 17 November 2017 (see ID# G.3 in table 3). The ERT further notes that the deadline in the workplan for the establishment of a legal framework, prepared in response to the review of the Party's 2016 annual submission, was 31 December 2016; (b) Sufficient capacity has not been ensured for timely performance of the functions defined in the guidelines for national systems as outlined in paragraph 10(b) of the annex to decision 19/CMP.1 in conjunction with decision 3/CMP.11, including data collection for estimating emissions by sources and removals by sinks, and arrangements for ensuring the technical competence of the staff involved in the inventory development process. Although some staffing additions were made for experts working on LULUCF issues, other deadlines have not been met. During the review the ERT was informed by Cyprus that the necessary progress between the 2016 and 2017 submissions was not achieved owing to strict budgetary and public finance limitations in recent years. The budget for additional experts for the 2017 submission was not provided. A budget	Yes. Adherence to reporting guidelines under Article 7, paragraph 1, of the Kyoto Protocol

ID#	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue and or a problem? If yes, classify by type

allocation has been requested from the Ministry of Finance to hire external experts for the preparation of the 2018 submission; however, final decisions on the improvement of the inventory team are still pending because the budget for 2018 was still not approved (at the time of the review week, approval was expected between mid-October and early November 2017 at the latest). The ERT notes the underlying personnel and financial resource problems identified by the Party. The ERT further notes that the implementation of national system requirements may differ according to national circumstances (according to paragraph 1 of the annex to decision 19/CMP.1, in conjunction with 3/CMP.11). However, it is the view of the ERT that, until these issues are resolved, the national system will not be able to ensure that improvements outlined in the Party's national inventory improvement plan will be addressed. The deadlines in the workplan for ensuring sufficient capacity, prepared in response to the review of Cyprus' 2016 annual submission, were between 1 February 2017 and 31 August 2017.

The ERT concluded that, in accordance with the information provided in the NIR, as well as additional information provided by the Party during the review, the national system of Cyprus does not meet the requirements outlined in decision 19/CMP.1, in conjunction with decision 3/CMP.11, and raised this issue in the list of potential problems formulated in the course of the 2017 review.

In the list of potential problems, the ERT recommended that Cyprus provide to the ERT:

(a) An updated workplan, with feasible deadlines, that aims at improving the functionality of its national system. The workplan should include revised dates and if necessary revised actions for implementation of specific activities within the national system;

(b) An updated QA/QC and verification plan including revised actions and dates to cover the pending identified QA/QC problems.

In addition, the ERT recommended that Cyprus provide sufficient evidence to the ERT of the financial capacity to support the institutional, legal and procedural arrangements necessary to perform the functions defined in decision 19/CMP.1 and evidence of sufficient technical capacity for the preparation of the 2018 submission.

In response to the list of potential problems, Cyprus provided an updated workplan, including an updated table listing the actions and deadlines for national inventory improvement. In addition, the Party provided information on the following areas:

(a) Legislation on the national system adopted on 17 November 2017;

(b) Revised QA/QC programme (see below);

(c) Updated GHG inventory improvement plan (see below);

(d) Decisions on strengthening experts' capacity and allocation of resources for GHG inventory preparation (see below);

(e) The completed project on supporting the LULUCF experts' work.

The Council of Ministers decision on the national system for the preparation of the annual GHG inventories was adopted on 17 November 2017. A legal framework was formally established in Cyprus to define the roles and responsibilities of specific

ID[a]	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue and/or a problem[b]? If yes, classify by type
		ministries, agencies and other entities in relation to timely data provision and national GHG inventory preparation. Cyprus' QA/QC programme has been revised substantially. A revised description of the QA/QC system contains all elements required by the 2006 IPCC Guidelines (QA/QC plan, general QC procedures, category-specific QC procedures, QA procedures, QA/QC interaction with uncertainty analyses, documentation and archiving procedures, timing, roles and responsibilities, etc.). In addition, the GHG inventory improvement plan was updated. The plan presents specific actions that Cyprus has identified to improve its national GHG inventory. The issues identified during the 2017 review listed in the provisional main findings sent to the Party in accordance with the UNFCCC Annex I inventory reporting guidelines, paragraphs 66 and 84, were included in the plan, indicating the deadlines for their implementation. The deadlines to address pending recommendations from previous reviews were also revised. The indicated deadline for most improvements is the 2018 submission (including complete reporting of the LULUCF sector and KP-LULUCF under Article 3, paragraphs 3 and 4, of the Kyoto Protocol). Application of higher-tier methods is planned for the 2019 submission and some improvements have been postponed until the 2020 submission (e.g. a few waste sector improvements and enhancement of the documentation and archiving system). With regard to addressing the underlying resource problems to ensure sufficient capacity for the timely performance of the functions defined in the guidelines for national systems, the recently adopted Council of Ministers decision includes the allocation of an annual budget for consulting services for the 2019–2024 period. For the preparation of the 2018 submission, a supplementary budget has been approved by the Ministry of Finance and Parliament for 2017 to hire consultants for the preparation of the national GHG inventory. The inventory team for the 2018 submission will include two additional experts through contracting. One additional permanent environment officer has been added to the climate action team and one more is expected during 2018. These officers will be trained to work on national GHG inventories and will be assigned with specific QA tasks for the GHG inventory. The ERT considers that the potential problem relevant to the national system has been addressed and may be resolved by the implementation of the revised workplan. On the basis of the national system issues identified, taking into consideration the recent adoption of the Council of Ministers decision on the national system for the preparation of the annual GHG inventories, adopted on 17 November 2017, and noting the recommendation for an in-country review made by the ERT that reviewed the 2016 annual submission, the ERT considers that the in-country review that was recommended in the previous review report (FCCC/ARR/2016/CYP) should be conducted only in 2019. The ERT recommends that Cyprus implement the workplan in accordance with the listed tasks and deadlines and update the text in the NIR accordingly to describe any changes to the national system. The ERT also recommends that the Party follow the activities outlined in the revised QA/QC plan and GHG inventory improvement plan to ensure continuous and sustainable reporting and to report the progress of implementation of these plans in the NIR of the 2018 submission.	
G.23	National registry	The ERT noted that the Party reported that there are no changes to the registry, or its description, in the NIR. During the review Cyprus informed the ERT that the necessary infrastructure to connect the Cypriot registry to the ITL was installed and	Yes. Adherence to reporting

ID[a]	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue and or a problem[20] If yes, classify by type
		tested successfully with the ITL in 2016. The ERT recommends that Cyprus report any change to its national registry (compared with the information in the previous submission) in its NIR, in accordance with decision 15/CMP.1, annex, paragraph 22.	guidelines under Article 7, paragraph 1, of the Kyoto Protocol
G.24	Kyoto Protocol units	The ERT noted that Cyprus did not report information in its NIR on Kyoto Protocol units, in accordance with decision 15/CMP.1, annex, paragraphs 12–18, namely on: information reported in the SEF tables; discrepancies and notification; publicly accessible registry information; and the calculation of the CPR. During the review, the Party explained that the CPR is calculated in its report to facilitate the calculation of the assigned amount and that it will be established upon the completion of the review of that report, which was still ongoing at the time of the review week (the review report was published on 20 October 2017). During the review, the Party explained that its CPR is 42,705,116 t CO_2 eq, determined as 90 per cent of the assigned amount. The ERT confirmed that this value is lower than eight times the most recent 2015 emissions. The ERT agrees with the calculation of the CPR. The ERT recommends that the Party report in the NIR information in accordance with decision 15/CMP.1, annex, paragraphs 12–18, in conjunction with decision 3/CMP.11, including on: information reported in the SEF tables; discrepancies and notification; publicly accessible registry information; and the calculation of the CPR and the method used to calculate it.	Yes. Adherence to reporting guidelines under Article 7, paragraph 1, of the Kyoto Protocol
Energy			
E.13	1. General (energy sector) – liquid fuels – CO_2, CH_4 and N_2O	Cyprus reports "IE" for several subcategories in the energy sector with no information provided in CRF table 9 to indicate where these emissions are reported, specifically: light-duty trucks, heavy-duty trucks and motorcycles under road transportation; biomass emissions from domestic navigation; gasoline and diesel oil from off-road vehicles and other machinery; and gasoline and biomass from fishing. Cyprus reports "IE" for CO_2, CH_4 and N_2O emissions from iron and steel production, noting in a cell comment that "liquid fuel consumption for iron and steel is included in non-ferrous metals (1.A.2.b)". However, CRF table 9 does not include information on the reporting of "IE". During the review, the Party reported that descriptions for "IE" are given in the node comment box by CRF Reporter when that notation key is used and that it cannot find where to report the information in order for it to appear in CRF table 9. The ERT noted that helpful instructions may be found in the CRF user manual, specifically section 5.3.5.4 "Notation key explanations". The ERT also noted that comments entered for 1990 will be automatically copied to the rest of the time series by the CRF Reporter software. The ERT recommends that the Party complete the cell comments section in CRF Reporter when entering data for all instances of "IE" so that the information appears in CRF table 9.	Yes. Adherence to the UNFCCC Annex I inventory reporting guidelines
E.14	International aviation – liquid fuels (jet kerosene) – CO_2, CH_4 and N_2O	The ERT noted that discrepancies occur between the NIR, CRF table 1.D and CRF table 1.A(b) for jet kerosene (international aviation bunkers) for all years. For example, in 2015, jet kerosene reported in the NIR (table 3.19) was 238.1 kt, CRF table 1.A(b) reported 223.16 kt, while in CRF table 1.D jet kerosene was reported as 10,515.00 TJ (approximately 238.4 kt). During the review, the Party reported that CRF table 1.A(b) has been estimated using data provided by the national statistical service, whereas CRF table 1.D was calculated using data from EUROCONTROL, the European Organisation for the Safety	Yes. Adherence to the UNFCCC Annex I inventory reporting guidelines

ID#	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue and/or a problem?[20] If yes, classify by type
		of Air Navigation. The Party also supplied a table detailing the estimation of fuel consumption for aviation. The ERT identified the source of the discrepancy; namely that the Party had entered all jet kerosene consumption, including, incorrectly, fuel used in domestic aviation, into CRF table 1.D. The ERT recommends that the Party correct the discrepancies between the NIR and CRF tables 1.A(b) and 1.D with respect to jet kerosene consumption, and enter the correct data covering only international aviation in CRF table 1.D.	
E.15	1.A.1.c Manufacture of solid fuels and other energy industries – biomass – CO_2, CH_4 and N_2O	Table 3.4 in the NIR reports consumption of solid biomass in charcoal production plants (transformation) with values ranging from 45 kt to 405 kt. Annex III to the NIR reports indigenous production of charcoal, which varies from 1.0 kt to 5.0 kt. However, in category 1.A.1.c (manufacture of solid fuels and other energy industries), "NO" is reported for fuel consumption and emissions for all years in the CRF tables. During the review, the Party acknowledged the miscategorization of charcoal and reported that it will be addressed and corrected in the 2018 submission. The ERT recommends that the Party report consumption of biomass for charcoal production and the associated emissions in category 1.A.1.c in the CRF tables and provide a transparent description in the NIR including the conversion efficiency (kg of biomass input per kg of charcoal produced).	Yes. Accuracy
E.16	1.A.2 Manufacturing industries and construction – all fuels – CO_2, CH_4 and N_2O	In addition to the data entry or conversion errors identified in ID#s E.14 above and E.18 below, a number of other errors affecting sections of the time series have been identified by the ERT and subsequently acknowledged by the Party. These errors include: missing liquid fuel AD for 1.A.2.d (pulp, paper and print) for 1999–2006 (erroneously reported as "IE"); other fossil fuel N_2O emissions wrongly entered for 1.A.2.f (non-metallic minerals) for 2006; and incorrect entry of solid fuel CO_2 emissions for 1.A.2.f (non-metallic minerals) for 1996. The ERT recommends that the Party correct the data entry errors related to categories 1.A.2.d (AD for 1999–2006) and 1.A.2.f (N_2O emissions in 2006 and CO_2 emissions in 1996). To avoid such errors occurring in future submissions, the ERT also encourages Cyprus to elaborate a QA/QC plan for the energy sector (which accounts for over 70 per cent of total GHG emissions in the country).	Yes. Adherence to the UNFCCC Annex I inventory reporting guidelines
E.17	1.A.2.b Non-ferrous metals – liquid fuels – CO_2, CH_4 and N_2O	AD for non-ferrous metals have been reported for all years of the time series except for 2013 and 2014, which were reported as "NO". During the review, the Party confirmed that there was no consumption of liquid fuels for non-ferrous metals in 2013 and 2014, and elaborated that the operation of the installations continued during those years with the use of other energy sources (i.e. electricity from the mains supply). The ERT recommends that the Party describe in the NIR the rationale for reporting "NO" for liquid fuels consumption for 2013 and 2014, along with any supporting information, to enhance the transparency of the submission.	Yes. Transparency
E.18	1.A.2.c Chemicals – liquid fuels – CO_2, CH_4 and N_2O	Liquid fuel consumption for chemicals exhibits an unusual trend in recent years. Consumption was held constant for 2012–2014 at 43.00 TJ before increasing to 83.40 TJ in 2015, a 94.0 per cent increase. CO_2, CH_4 and N_2O emissions for 2013 are reported as "NO". During the review, the Party acknowledged the mistake and reported that both fuel consumption and emissions were zero for 2013. However, an explanation for the trend has not been provided in the NIR. The ERT recommends that the Party correct the AD for 2013 (i.e. report liquid fuel consumption as "NO") and explain the inter-annual variation in AD and CO_2, CH_4 and N_2O emissions in the NIR.	Yes. Transparency

ID[a]	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue and/or a problem[b]? If yes, classify by type
E.19	1.A.2.f Non-metallic minerals – other fossil fuels – CO_2, CH_4 and N_2O	In the NIR (p.291), Cyprus reports the indigenous production and consumption of industrial waste (non-renewable). This is reported under other fossil fuels in CRF table 1.A(a)s2. During the review, the Party explained that it reports the non-biomass fraction of the waste incinerated and that this covers sewage sludge, tyres, alternative solid fuel, meat and bone meal, and compost. It further explained that the waste is incinerated in the furnace burning the raw material to produce cement. The ERT recommends that the Party include a description in the NIR explaining that industrial waste covers sewage sludge, tyres, alternative solid fuel, meat and bone meal, and compost, and that the waste is incinerated for the production of thermal energy in the furnace burning the raw material to produce cement.	Yes. Transparency
E.20	1.A.3.a Domestic aviation – liquid fuels – CO_2, CH_4 and N_2O	Table 3.19 in the NIR shows the split between domestic and international aviation. Data for the period 1990–2004 are backcasted based on the domestic/international split for 2005 (i.e. domestic consumption was responsible for 1.48 per cent of total aviation fuel consumption in 2005 and the same ratio was assumed for 1990–2004). The ERT noted that from 2005 onwards the share of domestic aviation shows a rapidly decreasing trend and that backcasting this trend over the early years would give a much higher level of domestic aviation than the Party has estimated. The ERT recommends that the Party investigate options for a more accurate method of backcasting the trend in the domestic/international aviation split, using supporting data such as landings and take-offs where possible, and report the results in the NIR.	Yes. Consistency
E.21	1.B.2.a Oil – CH_4	Cyprus reports oil refining/storage for 1990–2004. The CH_4 IEF is the lowest among reporting Parties (e.g. 0.003 kg/10^3 m^3 crude oil refined for 2004) and lower than the 2006 IPCC Guidelines default range of 2.6–41 kg/10^3 m^3 crude oil refined (volume 2, table 4.2.4). During the review, the Party acknowledged that an error had occurred during unit conversion and that the CH_4 EF value should have been 3.35 kg/10^3 m^3. The ERT notes that the midpoint of the IPCC default range is 21.8 kg/10^3 m^3 crude oil refined. The ERT recommends that the Party revise its reported CH_4 EF for the years 1990–2004, report the revised emission estimates and explain this recalculation in the NIR.	Yes. Accuracy
IPPU			
I.16	2.A Mineral Industry – CO_2	The ERT noted that the NIR (p.112, table 4.9) shows the total values of CO_2 emissions for the 2016 initial submission and emissions after the implementation of recommendations from the previous review report (recalculations). Considering the values of recalculations reported in NIR table 4.10 (cement production) and table 4.11 (ceramics production), the ERT found a mistake in the allocation of the emissions in two of the rows in NIR table 4.9 (the values in the "initial submission" row and "After ERT recommendations" are reversed). The Party recognized that the values in NIR table 4.9 have been wrongly allocated. The ERT encourages Cyprus to ensure the accuracy of NIR table 4.9 "Impact of recalculations on CO_2 emissions from mineral industry".	Not an issue/problem
I.17	2.A.1 Cement production – CO_2	In its 2017 NIR (section 4.2.1, methodological issues) for category 2.A.1 (cement production), Cyprus states that there has been only one cement installation operating in the country since 2012. For the period 2012–2014 the clinker production has increased annually and, during the 2016 review, the Party explained that the reason for the sharp increase in cement	Yes. Transparency

ID[a]	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue and or a problem?[20] If yes, classify by type
		production between 2013 and 2014 was an increase in exports to Lebanon. However, in 2015, clinker production decreased by 182.26 kt, which is 10 per cent below the 2014 value and a decrease of 96.64 kt CO_2 emissions (from 973.76 kt CO_2 in 2014 to 877.13 kt CO_2 in 2015). During the 2017 review, Cyprus explained that clinker production is regulated by available stocks, storage capacity and demand. Between 2014 and 2015, according to the information provided by the installation, there was a reduction in demand for exports, which was reflected in the final clinker production for 2015. The ERT concludes that Cyprus has provided sufficient information during the review to justify the reduction in cement production emissions. The ERT recommends that the Party include information in the corresponding section of its NIR (section 4.2.1, methodological issues, category 2.A.1) to justify the decrease in CO_2 emissions between 2014 and 2015.	
I.18	2.A.2 Lime production – CO_2	For CO_2 emissions, Cyprus only stated in the NIR (section 4.2.1, methodological issues, p.110) the EF used for the estimation and the type of lime produced (slaked lime produced by the only installation). Relevant information such as type of AD, AD collection procedures, method, emissions and information on the final use of lime are not presented in the 2017 NIR. During the review, Cyprus provided the ERT with its underlying calculations showing the estimation of CO_2 emissions from lime production. The ERT noted that Cyprus was not correcting for the emissions from hydrated lime, although the Party has enough information to apply this correction. Further, according to the 2006 IPCC Guidelines, it is good practice to include a correction for hydrated lime under tier 2, and where data are available, under the tier 1 method. During the review, the Party provided unofficial estimates of CO_2 emissions using the tier 2 methodology proposed in the 2006 IPCC Guidelines (volume 3, chapter 2, pp.2.19–2.27) based on AD available on the types of lime produced (one installation, one type of lime) and including the correction for hydrated lime and using the IPCC default factor (0.97). The ERT noted that the new values compared with those in the initial submission (3 per cent difference) do not represent a significant change in the trend of the emissions and that the change only represents 0.001 per cent of the total for 2015 (excluding LULUCF) and 0.003 per cent for 1990 (excluding LULUCF) and would be below the threshold for commencement of an adjustment procedure in accordance with paragraph 80(b) of the annex to decision 22/CMP.1 in conjunction with decision 4/CMP.11. The ERT recommends that Cyprus account for CO_2 emissions from hydrated lime for the entire time series and include in its NIR a complete description of the methodology used for the estimation of CO_2 emissions from lime production (2.A.2), including the use of the correction for hydrated lime.	Yes. Accuracy
I.19	2.A.4 Other process uses of carbonates – ceramics – CO_2	According to CRF table2(I).A-Hs1 the amount of ceramics produced increased between 2014 (83.73 kt) and 2015 (84.47 kt). However, the emissions decreased by 25 per cent from 9.41 kt CO_2 in 2014 to 7.03 kt CO_2 in 2015. The decrease was also reflected in the IEF, which changed from 0.11 t CO_2/t product in 2014 to 0.08 t CO_2/t product in 2015. During the review, Cyprus explained that there was a mistake in the emission estimate. For 2015, the estimate should have been 8.50 kt CO_2 (and not 7.03 kt CO_2 as reported). This led to an IEF of 0.10 t CO_2/t product. In addition, as the revised 2015 IEF (0.10 t CO_2/t product) is still lower than the 2014 value (0.11 t CO_2/t product), Cyprus explained that this is because an installation producing bricks ceased operations, resulting in seven operating facilities instead of eight. The emissions are directly obtained from the installations, so in this case the Party, to support the information provided, presented detailed data on	Yes. Accuracy

ID#	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue and or a problem? If yes, classify by type
		process emissions in the ceramics installations and the final emissions in aggregate as well as the AD. The ERT agreed with the new estimates for emissions and the IEF provided by Cyprus and concluded that the information provided is sufficient to explain the lower IEF for 2015 compared with 2014. The value presented initially in the 2017 submission was underestimated but the difference with the corrected value (1.48 kt of CO_2) only represents 0.02 per cent of the national total GHG emissions in 2015 by Cyprus (excluding LULUCF), which is below the significance threshold for commencement of an adjustment procedure in accordance with paragraph 80(b) of the annex to decision 22/CMP.1 in conjunction with decision 4/CMP.11. In implementing the recommendation from the 2016 ARR (see ID# I.4 in table 3), the ERT recommends that Cyprus update in its NIR the change in the number of installations operating (from 2014 to 2015) and report the correct values for 2015 emissions and the IEF. The ERT also recommends that Cyprus report the correct emission estimate for 2015 in CRF table 2(I).A-Hs1.	
I.20	2.A.4 Other process uses of carbonates – other uses of soda ash – CO_2	Following a recommendation from the 2016 ARR (see ID# I.5 in table 3), Cyprus collected AD and estimated the emissions for the entire time series for other uses of soda ash. The ERT noted that, according to the AD presented in the NIR (section 4.2.1, p.112), the imports of soda ash decreased sharply between 2009 (1,438 t) and 2010 (711 t), a 51 per cent decrease, and for 2015 the imports are the lowest of the entire time series (326 t). During the review, Cyprus provided an explanation regarding the causes of the decrease in imports of soda ash during the period between 2010 and 2015 compared with the period 1990–2009, and stated that, according to information obtained from the Customs Department, the main consumers of soda ash in Cyprus (90 per cent) are engaged with the production of building materials. Since 2010 there has been a large decline in the building industry, which is reflected in the consumption of building products and subsequently in imports and use of soda ash. The ERT agreed with the explanation provided and concluded that it justifies the decrease in imports of soda ash during the period between 2010 and 2015 compared with the period 1990–2010. The ERT recommends that Cyprus include in its NIR sufficient information to justify the decrease in the imports of soda ash during the period between 2010 and 2015.	Yes. Transparency
I.21	2.F Product uses as substitutes for ODS – HFCs	In the 2016 and 2017 NIRs (section 4.5.1, p.119, and section 4.5.2, p.120), Cyprus explains that HFC emissions are based on the annual per capita emission average of four countries with similar socioeconomic conditions (Greece, Italy, Malta and Spain). The previous ERT accepted this approach as an interim solution, until the Party is able to collect enough detailed country-specific information and AD for the entire time series (see ID#s I.10 and I.12 in table 3 for progress on data collection). It is stated in the 2017 NIR (section 4.5.2, p.123) that for 2015 emissions from product uses as substitutes for ODS (2.F all categories) were estimated assuming the same factors and contribution as for 2014, including the same population, namely 847,000 based on data from Eurostat. However, the ERT noted that the population of Cyprus for 2015 is 848,319 based on Eurostat data (http://ec.europa.eu/eurostat). During the review, Cyprus provided unofficial revised estimates for all 2.F categories using the population value available from Eurostat (848,319). The ERT noted that emissions for 2.F.2 foam blowing agents decreased from 1.80 kt CO_2 eq in the initial official submission (submitted on 8 May 2017) to 1.62 kt CO_2 eq in the unofficial updated estimate (a decrease of 0.18 kt CO_2 eq) and emissions for 2.F.4 aerosols also decreased from 8.94 kt CO_2 eq in the initial official submission to 8.44 kt CO_2 eq in the unofficial updated estimates (a	Yes. Transparency

ID#	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue and or a problem[20] If yes, classify by type
		decrease of 0.50 kt CO_2 eq). The emissions for 2.F.3 fire protection changed from 3.54 kt CO_2 eq in the initial official submission to 3.67 kt CO_2 eq in the unofficial updated estimates, a difference of 0.13 kt CO_2 eq or 0.002 per cent of total national emissions. The changes in estimated emissions for categories 2.F.2, 2.F.4 and 2.F.3 do not represent a significant change in the total of the annual emissions for 2015 and would be below the threshold for commencement of an adjustment procedure in accordance with paragraph 80(b) of the annex to decision 22/CMP.1 in conjunction with decision 4/CMP.11. However, the HFC emissions for category 2.F.1 refrigeration and air conditioning for 2015 changed from 345.03 kt CO_2 eq in the initial official submission (submitted on 8 May 2017) to 353.69 kt CO_2 eq in the unofficial updated estimates and the difference (8.67 kt CO_2 eq or 0.1 per cent of total national emissions) represents a potential underestimate of the emissions from this category for 2015. The ERT included this issue in the list of potential problems and further questions raised by the ERT. In response to this list, Cyprus submitted revised HFC emissions for 2015 (353.69 kt CO_2 eq) using the updated population data for 2015 from the Statistical Service of Cyprus and including the distribution of these emissions in the different sources under category 2.F.1. The ERT agrees with the new estimate of total emissions provided by the Party. The ERT recommends that Cyprus update in its NIR the description of the AD used and the description of the method used to allocate the emissions under 2.F.1 to the different sources.	
I.22	2.F Product uses as substitutes for ODS – HFCs	In reviewing the estimates submitted by Cyprus during the review week on HFC emissions (see ID# I.21 above) the ERT also noted a mistake in the total emission estimate for 2014 for category 2.F.1. During the review, the Party stated that the mistake was that the 2013 average emissions per capita were used to estimate 2014 emissions. The ERT noted the difference (8.11 kt CO_2 eq) between the emissions presented in the original submission for 2014 (345.03 kt CO_2 eq) and the revised estimate of emissions (353.15 kt CO_2 eq) calculated by ERT and the Party. The ERT included this issue in the list of potential problems and further questions raised by the ERT. In response to this list, Cyprus submitted revised HFC emissions for 2014 (353.15 kt CO_2 eq) using the updated average emissions per capita for 2014 (0.4169 t/person) and included the distribution of these emissions in the different sources of the 2.F.1 category. The ERT recommends that Cyprus update in its NIR the methodology used, including the average emissions per capita applied and the description of the method used to allocate the emissions under 2.F.1 to the different sources.	Yes. Transparency
I.23	2.G Other product manufacture and use – N_2O and SF_6	It is stated in the 2017 NIR (sections 4.6.1 and 4.6.2, pp.126–128) that SF_6 emissions from 2.G.1 (electrical equipment), N_2O emissions from 2.G.3.a (medical applications) and N_2O emissions from 2.G.3.b (other – propellant for pressure and aerosol products) were estimated based on the annual per capita emission average and assuming the same factors as for 2014, including the same population (i.e. 847,000 based on Eurostat data). However, the ERT noted that the population of Cyprus for 2015 is 848,319 based on Eurostat data (see ID# I.21 above). During the review, the Party provided revised estimates of SF_6 and N_2O emissions for categories 2.G.1, 2.G.3.a and 2.G.3.b using the 2015 population data from Eurostat and the same per capita emissions for the cluster of countries used for 2014 estimations. Considering that the per capita emissions for 2014 for the countries used has not changed significantly in recent years (section 4.6.2, p.127) the ERT agreed with the revised estimations using the correct 2015 population. The ERT noted that emissions for category 2.G.1 changed from 0.148 kt CO_2	Yes. Accuracy

ID[a]	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue and/or a problem[b]? If yes, classify by type
		eq in the initial official submission (submitted on 8 May 2017) to 0.151 kt CO_2 eq in the unofficial updated estimates (an increase of 0.003 kt CO_2 eq or 0.00003 per cent of total national emissions.) and for category 2.G.3.a emissions changed from 5.60 kt CO_2 eq in the initial official submission to 5.61 kt CO_2 eq in the unofficial updated estimates (an increase of 0.01 kt CO_2 eq or 0.0001 per cent of total national emissions.). The emissions for category 2.G.3.b changed from 54.03 kt CO_2 eq in the initial official submission to 54.08 kt CO_2 eq in the unofficial updated estimates, an increase of 0.05 kt CO_2 eq or 0.0006 per cent of total national emissions. The ERT also noted that the recalculations do not represent a significant underestimate of emissions and would be below the threshold for commencement of an adjustment procedure in accordance with paragraph 80(b) of the annex to decision 22/CMP.1 in conjunction with decision 4/CMP.11. The ERT recommends that Cyprus recalculate SF_6 emissions from 2.G.1 (electrical equipment), N_2O emissions from 2.G.3.a (medical applications) and N_2O emissions from 2.G.3.b (other – propellant for pressure and aerosol products) and include the most updated values for population and average per capita emissions and update the values in CRF tables 2(I).A-Hs2 and 2(II)B-Hs2. The ERT also recommends that Cyprus update the description of the methodology for 2.G.1, 2.G.3.a and 2.G.3.b in the NIR.	
Agriculture			
A.8	3. General (agriculture) – N_2O	In the NIR (annex II, p.254), Cyprus provides a copy of the CRF summary table 2 per inventory year. However, the ERT noted that the values reported here for the agriculture sector do not agree with the values reported in CRF summary table 2 of the 2017 submission. For example, in CRF summary table 2, overall emissions from the agriculture sector amount to 559.30 kt CO_2 eq for 2015, while in the NIR this value amounts to 546.64 kt CO_2 eq. Differences here are related to differences in the results for category 3.D N_2O emissions from agricultural soils. These differences are also found for other years reported. During the review, Cyprus confirmed that the correct values were those provided in the CRF tables. The ERT recommends that Cyprus report the same GHG emissions from agricultural soils in both the CRF tables and the NIR.	Yes. Adherence to the UNFCCC Annex I inventory reporting guidelines
A.9	3.A.4 Other livestock – CH_4 and N_2O	Cyprus explains in the NIR (section 5.2.2, methodological issues, p.133) that, given the lack of annual animal data, available information for 1985, 1994, 2002 and 2010 was used to estimate the populations of horses, mules and asses for the 1990–2010 time series by linear interpolation. Nevertheless, given that the information was not available for the following years (2011–2015), animal numbers were kept constant at the 2010 level for 2011–2015. In the view of the ERT, this results in a potential overestimation for this category, because animal numbers have declined over these years. During the review, Cyprus indicated that it will use a different calculation method to estimate the numbers of horses, mules and asses for the 2018 submission, also explaining that the extrapolation of the 2003–2010 trend cannot be applied for mules and asses because it leads to negative numbers. The ERT recommends that Cyprus use a data gap filling technique in accordance with the 2006 IPCC Guidelines to calculate the population of horses, and an appropriate database (e.g. international database sources if national data are not available) to estimate the number of mules and asses for the 2011–2015 period, and use these values to estimate CH_4 emissions from enteric fermentation for this category using a tier 1 methodology. In addition, the ERT recommends that the Party use the	Yes. Accuracy

ID[a]	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue and/or a problem[20] If yes, classify by type
		same population numbers to calculate emissions from category 3.B (manure management). The ERT believes that future ERTs should consider this issue further to ensure that there is not an underestimate of emissions.	
A.10	3.B.3 Swine – CH_4	The ERT noted that, although Cyprus used a tier 2 methodology to estimate CH_4 emissions from manure management from dairy and non-dairy cattle (NIR section 5.3.2, p.139), it used a tier 1 method for CH_4 emissions from swine, which account for 88.9 per cent of total emissions from manure management. This is not in line with the 2006 IPCC Guidelines. During the review, Cyprus indicated that the necessary AD for the tier 2 estimation are not available and that, owing to limitations on resources, it is not possible to progress from a tier 1 to a tier 2 methodology for swine. Although the ERT understands the national circumstances of Cyprus, it recommends that Cyprus implement a tier 2 methodology to estimate CH_4 emissions from manure management for swine, in accordance with the 2006 IPCC Guidelines, which could be done by considering desk studies or expert judgment.	Yes. Accuracy
A.11	3.D.a Direct N_2O emissions from managed soils – N_2O	Cyprus used a tier 1 methodology to estimate N_2O emissions from agricultural soils in the NIR (section 5.5.2, p.147), although N_2O emissions from this category is a key category by level and trend (CRF table 7). Emissions from inorganic fertilizers (3.D.a.1) contributed 36.7 per cent (0.12 kt N_2O) of total direct N_2O emissions from managed soils in 2015 (0.32 kt N_2O), and emissions from animal manure (3.D.a.2.a) contributed 58.2 per cent of total N_2O emissions in this category (0.19 kt N_2O). Cyprus also indicated that a tier 1a methodology was used to estimate emissions from animal manure (NIR, p.147) and from sewage sludge applied to soils (p.148). This is not in line with the 2006 IPCC Guidelines (volume 4), because the tier 1a methodology is not included in those guidelines. In addition, a tier 2 methodology is recommended to estimate emissions from key categories. During the review, Cyprus indicated that, owing to limitations on resources, updating the methodology to estimate N_2O emissions from agricultural soils is not currently a priority. In addition, the Party acknowledged that the references to a tier 1a methodology in the NIR were an error. The ERT recommends that Cyprus implement a tier 2 methodology to estimate emissions from categories 3.D.a.1 and 3.D.a.2.a, considering desk studies or expert judgment as alternatives, given the national circumstances.	Yes. Accuracy
A.12	3.D.a.2 Organic N fertilizers – N_2O 3.D.b Indirect N_2O emissions from managed soils	The N input from manure applied to soils reported in CRF table 3.D declined by 22.1 per cent between 2014 (15,321,138 kg N/year) and 2015 (11,940,478 kg N/year). During the review, Cyprus indicated that the value for 2015 was revised because of a miscalculation identified during the QA/QC process in the total N excreted for non-dairy cattle, market swine and other livestock, and also indicated that, owing to time constraints, the correction was not applied for 1990–2014. In addition, the Party unofficially provided the revised estimates for total N excreted and total emissions from category 3.D.a.2, as well as the associated indirect N_2O emissions from managed soils. The ERT agrees with the revised estimates submitted during the review for direct and indirect N_2O emissions, and notes that the Party's current reporting does not lead to an underestimate of N_2O emissions for these categories. The ERT recommends that Cyprus correct the calculations for the estimation of N excreted applied to soils as organic fertilizer for non-dairy cattle, market swine and other livestock for the entire time series, and use the revised values to estimate N_2O emissions from organic fertilizers (category 3.D.a.2) and indirect N_2O emissions from managed soils (category 3.D.b).	Yes. Accuracy

ID#	*Finding classification*	*Description of the finding with recommendation or encouragement*	*Is finding an issue and or a problem?[a] If yes, classify by type*
A.13	3.F Field burning of agricultural residues – CO_2, CH_4 and N_2O	Cyprus explains in the NIR (section 5.7.2, p.152) that $Frac_{BURN}$ was assumed to be 0.25 in 1990 and linearly declined to 0.1 in 2008. After that year, this factor is kept constant. In response to a recommendation made by the previous ERT (see ID# A.7 in table 3), it also explained that this assumption was based on expert judgment for the category and on the fact that a national ban on the burning of crop residues was put in place in 2003. Nevertheless, the information provided by the Party does not allow the present ERT to judge whether the $Frac_{BURN}$ currently in use is adequate. In addition, Cyprus included in the 2017 NIR submission emissions arising from the burning of wheat residues only. In CRF table 3.F, emissions from barley, potatoes, and bean and pulses are indicated as "NE". The 2017 NIR indicates that only wheat was reported because no carbon fraction was available for other crops in the 2006 IPCC Guidelines. During the review, Cyprus indicated that the ban on the burning of crop residues is achieved under the Fire Prevention of Outdoors Law of 1988 (220/1988) as amended by 109(I)2002, but that there are no statistics on this type of fire, so their occurrence is based on the expert judgment of firefighters during field activities. Cyprus also stated that no further information is available to support any deviation from the 10 per cent assumption for $Frac_{BURN}$ currently being used, and that it is currently undertaking a literature review to obtain data on the carbon fraction of crops other than wheat, and a study of the carbon fraction used by other Parties included in Annex I to the Convention. The ERT notes the effort made by Cyprus to improve its determination of emissions in this category. The ERT recommends that Cyprus: (1) include a reference to the relevant legislation on the banning of crop residue burning in the NIR, along with applied expert judgment on the occurrence of fires; and (2) undertake a desk study to identify the appropriateness of the current $Frac_{BURN}$ and, if necessary, recalculate CH_4 and N_2O emissions from the burning of residues of barley, potatoes, bean and pulses in the annual submission using the revised $Frac_{BURN}$ values and report in the NIR on the results from any desk studies implemented.	Yes. Accuracy
A.14	3.G Liming – CO_2	In both the NIR (section 5.8, p.153) and the CRF tables (all related tables) of its submission, Cyprus uses the notation key "NO" to report emissions from liming activities. However, it does not explain the underlying assumptions that justify the reporting of "NO". During the review, Cyprus explained that according to expert judgment from the Department of Agriculture there are no information, data or documents to support the fact that liming does take place in Cyprus. Nevertheless, the ERT found scientific references containing the chemical characterization of the main agricultural soil types in Cyprus (i.e. Cohen et al., 2011 and 2012) that could be used to explain why no liming activities are carried out in the country. The ERT considers that Cyprus could include this information in the NIR to justify why liming activities are not carried out in the country. The ERT recommends that Cyprus include in the NIR information on the chemical characteristics of the main agricultural soils in Cyprus, including available references, to support the use of the notation key "NO" in this category.	Yes. Transparency
LULUCF			
L.17	4. General (LULUCF) – CO_2	The ERT noted the deviations in the total land area of Cyprus (CRF table 4.1) across the time series, ranging from 918.69 kha to 925.12 kha. Overall, between 1990 (918.69 kha) and 2015 (923.79 kha), the land area increased by 0.6 per cent. During the review, Cyprus explained that the total land area is equal to 924.15 kha and is stable.	Yes. Accuracy

ID#	*Finding classification*	*Description of the finding with recommendation or encouragement*	*Is finding an issue and or a problem[a]? If yes, classify by type*
		The ERT recommends that Cyprus make the necessary corrections in CRF table 4.1 and the NIR to report the total land area correctly and consistently throughout the time series and explain any recalculation as a result of these changes.	
L.18	4. General (LULUCF) – CO_2	The ERT noted that Cyprus reports in CRF table 4.1 areas of forest land remaining forest land, cropland remaining cropland, grassland remaining grassland, wetlands remaining wetlands, settlements remaining settlements and other land remaining other land. In addition, Cyprus reports settlements converted to other types of land. However, in the background CRF tables 4.A–4.F carbon stock changes are reported only for forest land (CRF table 4.A). During the review, Cyprus indicated that, since July 2017, it has been receiving technical support from the European Commission in order to improve its LULUCF reporting. The project is entitled "LULUCF inventories – capacity-building for Cyprus" and should be finalized by the end of October 2017. The Party anticipates reporting all emissions and removals for all conversions for the 2018 submission. The ERT welcomes the efforts undertaken by Cyprus to improve the completeness of its LULUCF reporting. Relevant recommendations are already included in ID#s L.8–L.10 in table 3.	Not an issue/problem
L.19	4.G HWP – CO_2	The ERT noted that Cyprus reports "NE" for CO_2 emissions from HWP in CRF table 4; while in CRF table 4.Gs2 for 2014, AD are reported for 1990–2014, but the same CRF table for 2015 is blank. During the review, Cyprus indicated that AD for 2015 were omitted by mistake and HWP will be reported in the next submission. The ERT recommends that Cyprus estimate and report the emissions and removals from HWP in CRF tables 4 and 4.Gs1 for the entire time series and AD for 2015 in CRF table 4.Gs2.	Yes. Completeness
Waste			
W.5	5. General (waste) – CO_2, CH_4 and N_2O	The ERT noted that Cyprus reported on waste streams that are used as fuel combustion sources in cement kilns for cement production. To a question raised by the ERT regarding the energy sector on the types of waste stream used in cement kilns (see ID# E.19 in table 3), Cyprus responded that these include sewage sludge, waste tyres, alternative solid fuel, meat and bone meal, and compost. In response to a question from the ERT on whether these waste streams have been taken into account in the waste sector (i.e. subtracted from categories 5.A solid waste disposal (fraction of MSW deposited to SWDS), 5.B biological treatment of solid waste and 5.D wastewater treatment and discharge (amount of organic component removed as sludge) for combustion in the cement industry during the respective inventory years), the Party responded that the majority of the waste used in cement production is imported directly by the cement producers for this specific purpose. Thus, only the fraction produced in Cyprus is taken into account when estimating the fraction of MSW deposited to SWDS. However, the ERT noted that in the NIR (annex III, CO_2 reference approach and comparison with sectoral approach, and relevant information in the national energy balance, p.291), under industrial waste, Cyprus reports an indigenous production of 124 TJ and only 1.0 TJ of imports for 2015. In response to a further request by the ERT for Cyprus to confirm the imports of waste by cement producers, the Party responded that the majority of the waste consumed by the cement installations is imported. This was confirmed by information received from the Statistical Service of Cyprus during the review that was not previously available. Cyprus indicated that, as a result of these new data, revised estimates will be made for the 2018 submission.	Yes. Accuracy

ID[a]	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue and or a problem[b]? If yes, classify by type
		The ERT recommends that the Party ensure that there is proper accounting and alignment of waste streams used as alternative fuel sources in the energy sector and in the waste sector (categories 5.A, 5.B and 5.D), taking into account whether the newly available data from the Statistical Service of Cyprus are applicable, and whether these are deducted from the waste sector, because they may be resulting in an overestimation of waste sector emissions. The ERT further recommends that the Party include in the NIR under the waste sector a discussion to transparently explain the waste streams (i.e. the AD) that are reported in the energy sector and in the waste sector based on the revised data from the Statistical Service of Cyprus.	
W.6	5. General (waste) – CH_4 and N_2O	The ERT noted that recalculations are presented in CRF table 8s3 and the NIR (sections 7.2.4 and 7.3.4) for the years 2010–2014 for categories 5.A solid waste disposal on land (–7.77 kt CO_2 eq for 2014) and 5.B biological treatment of solid waste (–6.05 kt CO_2 eq for 2014). The ERT notes that, although these recalculations are listed in the NIR, the following specific issues where identified: (a) For category 5.A solid waste disposal on land, the Party indicates in the NIR (p.171) that total MSW and annual per capita production for the years 2010–2014 were revised according to revised data provided by the Statistical Service of Cyprus. However, a discussion of how time-series consistency was ensured is not provided. Furthermore, the impact of the recalculations on the trend in emissions, including at the category, sector and national total level, is not discussed in the NIR; (b) For category 5.B biological treatment of solid waste, the Party reported that the N_2O EF is assumed to be 0.24 g/kg rather than 0.3 g/kg used in previous submissions. However, no additional information is provided in the NIR on the impact of the recalculations on the trend in emissions at the category, sector and national total level. During the review, the Party provided the information requested, which presented changes in AD for the period 2010–2014 and the impact of this on CH_4 and N_2O emissions for category 5.B.1.a and the impact of the recalculations for the biological treatment of solid waste. The ERT recommends that Cyprus enhance the NIR by providing explanatory information and justification for any recalculations, specifically including a description of the impacts of AD recalculations on time-series consistency and measures taken to ensure time-series consistency. The ERT encourages the Party to describe the quantitative impacts at the category, sector and national level.	Yes. Transparency
W.7	5.A Solid waste disposal on land – CH_4	CH_4 emissions from solid waste disposal on land is a key category in Cyprus and the Party implements a tier 2 method proposed by the 2006 IPCC Guidelines using the provided IPCC waste model spreadsheet (volume 5, page 3.7) with country-specific AD and some default parameters. In the NIR (section 7.2, p.170), Cyprus reports that for 2015 all solid waste disposal on land is considered to be managed. However, in the NIR (table 7.4) and the 2015 CRF table 5.A, CH_4 emissions from both managed and unmanaged solid waste disposal sites are estimated and reported as 133.64 kt and 269.36 kt, respectively, for 2015. During the review, Cyprus explained that the statement "all solid waste disposal on land emissions is considered managed in the year 2015" is a mistake because there are unmanaged waste disposal sites. The ERT recommends that the Party correct the information in the NIR to clarify that there are both managed and unmanaged waste disposal sites in the country.	Yes. Transparency
W.8	5.A Solid waste disposal on land	In the NIR (table 7.5, p.172), population is used in determining total municipal waste generated, using population and waste generation per capita as drivers. However, for the period 2012–2014 there is an observed decline in population and this is not	Yes. Transparency

ID#	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue and or a problem?[a] If yes, classify by type
	– CH_4	adequately explained in the NIR. In addition, other international data sources (such as the World Bank) show a steady increase in population to above 1 million for the period 2004–2015. During the review, the Party responded that the data of the World Bank refer to the population of the geographical area of the island of Cyprus, whereas the report and the emissions submitted by Cyprus refer only to the areas under the effective control of the Republic of Cyprus for which official data are available. The Party also provided a reference to the official population statistics used to estimate emissions from disposal of solid waste. Given that the Party uses waste generation rate per capita and population as key drivers to estimate the amounts of solid waste generated in the areas under the effective control of the Republic of Cyprus and there are parts of the country that are not under the Party's administrative control, the ERT recommends that Cyprus include more detailed information in its NIR on areas under its administrative control for which population is used as input to the SWDS model and provide a reference for its population data source.	
W.9	5.D Wastewater treatment and discharge – CH_4	In its NIR, Cyprus reports that the 2006 IPCC Guidelines present a single method for calculating CH_4 emissions from domestic wastewater handling. The ERT finds that the Party is applying the IPCC tier 1 method. However, according to CRF table 7, CH_4 emissions from wastewater treatment and discharge are identified as key using the trend assessment. In accordance with the UNFCCC Annex I inventory reporting guidelines, the NIR must include, for key categories, an explanation if the recommended methods (i.e. tier 2) from the appropriate decision tree in the 2006 IPCC Guidelines are not used by the Party. During the review, Cyprus explained that data are not readily available and have to be collected. Moreover, a literature review and assessment of the practices in other Parties included in Annex I to the Convention would have to take place to implement a tier 2 methodology and this is currently not possible owing to the limited resources available for inventory preparation. The ERT welcomed such an explanation from the Party and recommends that, in the NIR (section 7.5.1.1), Cyprus enhance its discussion to include information on the methodological choice followed and, in the light of resource availability, demonstrate that it is in accordance with the UNFCCC Annex I inventory reporting guidelines. In addition, the ERT recommends that Cyprus provide information in the NIR under category-specific planned improvements to reflect whether any plans are in place to move to higher-tier methods, as this category has been identified as key according to CRF table 7.	Yes. Transparency
W.10	5.D.1 Domestic wastewater – CH_4 and N_2O	In its NIR (p.192), the Party reports that the organic component removed as sludge in the inventory year and the N removed with sludge in the inventory year are both considered to be zero, which is consistent with the 2006 IPCC Guidelines in cases where a Party has no data on sludge. The ERT noted, however, that, in the NIR (table 5.21) under category 3.D.1.a.2.b (sewage sludge applied to soils), Cyprus reports that there are good sludge data available for all wastewater treatment plants for 2004 and 2005, and data for the public wastewater treatment plants for 2004–2012 in t dry matter. In addition, the Party reports on sewage sludge that is combusted as a fuel source in cement kilns for cement production (see ID# W.5 above). The ERT also noted that the Party reported in its 2016 submission a table (table 7.21 in the 2016 NIR) on volumes of sludge removal, but this table has been removed in the 2017 submission. The ERT recommends that Cyprus account for the component of organic material and N removed as sludge, because it is reported that there are good data sources for sludge in Cyprus, and explain any recalculations for categories 5.D.1 and	Yes. Accuracy

ID#	Finding classification	Description of the finding with recommendation or encouragement	Is finding an issue and/or a problem?* If yes, classify by type
		3.D.1.a.2.b as a result of this change.	
KP-LULUCF			
KL.5	General (KP-LULUCF)	The ERT noted irregular use of the notation keys and improper completion of the CRF tables as follows: (a) In CRF table NIR-1, Cyprus reports "NR" for all activities and pools except the organic soils pool for all activities and the mineral soils pool for FM, which are reported as "NO". HWP are also reported as "NR". "NE" is reported for all sources of non-CO_2 emissions in CRF table NIR-1, except CO_2, CH_4 and N_2O emissions from biomass burning on FM lands; (b) The entirety of CRF table 4(KP) is reported with notation keys, including for AR, deforestation and FM; (c) Although CRF table NIR-1 indicates that biomass burning is reported on FM lands, CRF table 4(KP-II)4 reports these emissions as "NO, IE" and CRF table 9 does not indicate where these emissions are reported; (d) The FM cap in the CRF accounting table has been left blank. During the review, Cyprus indicated that since July 2017 it has been receiving technical support from the European Commission in order to improve its LULUCF reporting. The project is entitled "LULUCF inventories – capacity-building for Cyprus" and should be finalized by the end of October 2017. The Party anticipates reporting all emissions for the 2018 submission. The ERT recommends that Cyprus enter the FM cap in the accounting table. Further, in implementing the recommendation for ID# KL.1 in table 3, the ERT encourages Cyprus to: ensure consistency between the information presented in CRF table NIR-1 and the CRF background tables for KP-LULUCF activities (including CRF table 4(KP-II)4); estimate emissions from HWP; and complete CRF table 4(KP) with emission/removal values or notation keys, as appropriate.	Yes. Adherence to the UNFCCC Annex I inventory reporting guidelines
KL.6	FM – CO_2	The ERT noted that the area of forest land remaining forest land reported in NIR table 9.2 (154,945 ha in 2014) differs from that reported in CRF table NIR-2 for FM (157,090 ha in 2014) and in other parts of the NIR (e.g. table 9.1 gives 194,508 ha in 2014). Cyprus indicated during the review that the CORINE land category "CLC324 (transitional woodland/shrub)" had been previously categorized as woody grassland, but the category was later changed to coniferous forest, resulting in the different coverages in these tables. The ERT recommends that Cyprus revise the area of forests included in the land transition matrix in order to be consistent with those reported in CRF table NIR-2 and 4(KP-I)B.1.	Yes. Adherence to the UNFCCC Annex I inventory reporting guidelines

* Recommendations made by the ERT during the review are related to issues as defined in paragraph 81 of the UNFCCC review guidelines, or problems as defined in paragraph 69 of the Article 8 review guidelines. Encouragements are made to the Party to address all findings not related to such issues or problems.

VI. Application of adjustments

10. The ERT has not identified the need to apply any adjustments to the 2017 annual submission of Cyprus.

VII. Accounting quantities for activities under Article 3, paragraph 3, and, if any, activities under Article 3, paragraph 4, of the Kyoto Protocol

11. Cyprus has elected commitment period accounting and therefore the issuance and cancellation of units for KP-LULUCF activities is not applicable for the 2017 review.

VIII. Questions of implementation

12. No questions of implementation were identified by the ERT during the review.

Annex I

Overview of greenhouse gas emissions and removals for Cyprus for submission year 2017 and data and information on activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol, as submitted by Cyprus

1. Tables 6–9 provide an overview of total GHG emissions and removals as submitted by Cyprus.

Table 6

Total greenhouse gas emissions for Cyprus, base year[c]–2015

(kt CO_2 eq)

	Total GHG emissions excluding indirect CO_2 emissions		*Total GHG emissions including indirect CO_2 emissions*[b]		*Land-use change (Article 3.7 bis as contained in the Doha Amendment)*[c]	*KP-LULUCF activities (Article 3.3 of the Kyoto Protocol)*[d]	*KP-LULUCF activities (Article 3.4 of the Kyoto Protocol)*	
	Total including LULUCF	*Total excluding LULUCF*	*Total including LULUCF*	*Total excluding LULUCF*			*CM, GM, RV, WDR*	*FM*[e]
FMRL								
Base year	5 522.99	5 623.32	NA	NA	NA		NA, NE, NO	
1990	5 521.32	5 621.64	NA	NA				
1995	6 915.99	7 042.07	NA	NA				
2000	8 251.89	8 325.55	NA	NA				
2010	9 408.37	9 574.40	NA	NA				
2011	9 106.40	9 275.27	NA	NA				
2012	8 605.24	8 768.17	NA	NA				
2013	7 876.57	8 048.74	NA	NA		NE, NO	NA, NE, NO	NE, NO, IE
2014	8 258.55	8 431.78	NA	NA		NE, NO	NA, NE, NO	NE, NO, IE
2015	8 298.56	8 466.67	NA	NA		NE, NO	NA, NE, NO	NE, NO, IE

Note: Emissions/removals reported in the sector other (sector 6) are not included in total GHG emissions.

[a] Base year refers to the base year under the Kyoto Protocol, which is 1990 for CO_2, CH_4 and N_2O and 1995 for HFCs, PFCs, SF_6 and NF_3. Cyprus has not elected any activities under Article 3, paragraph 4, of the Kyoto Protocol. For activities under Article 3, paragraph 3, of the Kyoto Protocol and FM under Article 3, paragraph 4, only the inventory years of the commitment period must be reported.

[b] The Party has not reported indirect CO_2 emissions in CRF table 6.

[c] The value reported in this column refers to 1990.

[d] Activities under Article 3, paragraph 3, of the Kyoto Protocol, namely AR and deforestation.

[e] Cyprus has not reported an FMRL in the CRF accounting table of its 2017 annual submission (see ID# KL.5 in table 5). In accordance with decision 2/CMP.7, the FMRL for Cyprus is equal to –157.000 kt CO_2 eq.

Table 7

Greenhouse gas emissions by gas for Cyprus, excluding land use, land-use change and forestry, 1990–2015

(kt CO_2 eq)

	CO_2[a]	*CH_4*	*N_2O*	*HFCs*	*PFCs*	*Unspecified mix of HFCs and PFCs*	*SF_6*	*NF_3*
1990	4 620.99	691.71	308.92	NE, NO	NO	NO	0.03	NO
1995	5 848.04	794.92	397.41	1.64	NO	NO	0.06	NO
2000	7 095.92	842.54	361.82	25.20	NO	NO	0.08	NO
2010	8 004.90	914.44	374.24	280.66	NO	NO	0.15	NO
2011	7 696.66	906.54	358.67	313.24	NO	NO	0.15	NO
2012	7 164.09	895.93	351.32	356.67	NO	NO	0.16	NO
2013	6 487.25	873.33	324.04	363.98	NO	NO	0.15	NO
2014	6 878.37	868.01	317.69	367.56	NO	NO	0.15	NO
2015	6 886.71	876.86	334.98	367.97	NO	NO	0.15	NO
Per cent change 1990–2015	**49.0**	**26.8**	**8.4**	**NA**	**NA**	**NA**	**475.7**	**NA**

Note: Emissions/removals reported in the sector other (sector 6) are not included in total GHG emissions.

[a] Cyprus did not report indirect CO_2 emissions in CRF table 6.

Table 8

Greenhouse gas emissions by sector for Cyprus, 1990–2015

(kt CO_2 eq)

	Energy	*IPPU*	*Agriculture*	*LULUCF*	*Waste*	*Other*[a]
1990	3 940.66	764.91	531.02	−100.32	385.06	
1995	5 093.38	855.64	666.42	−126.08	426.63	
2000	6 344.87	888.38	632.31	−73.66	460.00	
2010	7 494.87	942.06	637.48	−166.03	499.98	
2011	7 201.96	958.54	619.21	−168.87	495.55	
2012	6 709.07	957.16	593.81	−162.92	508.13	
2013	5 788.58	1 199.30	550.18	−172.17	510.68	
2014	5 959.03	1 422.37	537.75	−173.22	512.62	
2015	6 067.25	1 325.19	559.30	−168.11	514.94	
Per cent change 1990–2015	**54.0**	**73.2**	**5.3**	**67.6**	**33.7**	**NA**

Notes: (1) Emissions/removals reported in the sector other (sector 6) are not included in total GHG emissions. (2) Cyprus did not report indirect CO_2 emissions in CRF table 6.

[a] Sector 'other' is left blank in the CRF tables for Cyprus.

Table 9

Greenhouse gas emissions/removals from activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol by activity, base year[a]–2015, for Cyprus

(kt CO_2 eq)

	Article 3.7 bis as contained in the Doha Amendment[b]	*Article 3.3 of the Kyoto Protocol*		*FM and elected Article 3.4 activities of the Kyoto Protocol*				
	Land-use change	*AR*	*Deforestation*	*FM*[c]	*CM*	*GM*	*RV*	*WDR*
FMRL								
Technical correction				NA				
Base year	NA				NE, NO	NE, NO	NE, NO	NA, NE, NO
2013		NE, NO	NE, NO	NE, NO, IE	NE, NO	NE, NO	NE, NO	NA, NE, NO
2014		NE, NO	NE, NO	NE, NO, IE	NE, NO	NE, NO	NE, NO	NA, NE, NO
2015		NE, NO	NE, NO	NE, NO, IE	NE, NO	NE, NO	NE, NO	NA, NE, NO
Per cent change base year–2015					**NA**	**NA**	**NA**	**NA**

Note: Values in this table include emissions on lands subject to natural disturbances, if applicable.

[a] Base year refers to the base year under the Kyoto Protocol, which is 1990 for CO_2, CH_4 and N_2O and 1995 for HFCs, PFCs, SF_6 and NF_3. Cyprus has not elected any activities under Article 3, paragraph 4, of the Kyoto Protocol. For activities under Article 3, paragraph 3, of the Kyoto Protocol, and FM under Article 3, paragraph 4, only the inventory years of the commitment period must be reported.

[b] The value reported in this column refers to 1990.

[c] Cyprus has not reported an FMRL in the accounting table of its 2017 annual submission (see ID# KL.5 in table 5). In accordance with decision 2/CMP.7, the FMRL for Cyprus is equal to –157.000 kt CO_2 eq.

2. Table 10 provides an overview of relevant key data for Cyprus' reporting under Article 3, paragraphs 3 and 4, of the Kyoto Protocol.

Table 10
Key relevant data for Cyprus under Article 3, paragraphs 3 and 4, of the Kyoto Protocol

Key parameters	*Values*
Periodicity of accounting	(a) AR: commitment period accounting
	(b) Deforestation: commitment period accounting
	(c) FM: commitment period accounting
	(d) CM: not elected
	(e) GM: not elected
	(f) RV: not elected
	(g) WDR: not elected
Election of activities under Article 3, paragraph 4	None
Election of application of provisions for natural disturbances	Yes, for FM
3.5% of total base-year GHG emissions, excluding LULUCF	196.953 kt CO_2 eq (1 575.626 kt CO_2 eq for the duration of the commitment period)
Cancellation of AAUs, ERUs, CERs and/or issuance of RMUs in the national registry for:	
1. AR in 2015	NA
2. Deforestation in 2015	NA
3. FM in 2015	NA
4. CM in 2015	NA
5. GM in 2015	NA
6. RV in 2015	NA
7. WDR in 2015	NA

Annex II

Information to be included in the compilation and accounting database

Tables 11–13 include the information to be included in the compilation and accounting database for Cyprus. Data shown are from the original annual submission of the Party, including the latest revised estimates submitted, adjustments (if applicable), as well as the final data to be included in the compilation and accounting database.

Table 11
Information to be included in the compilation and accounting database for 2015, including on the commitment period reserve, for Cyprus
(t CO_2 eq)

	Original submission	*Revised estimates*	*Adjustment*	*Final*
CPR	NR			42 705 116
Annex A emissions for 2015				
CO_2	6 859 647	6 886 709		6 886 709
CH_4	876 722	876 864		876 864
N_2O	334 756	334 982		334 982
HFCs	359 309	367 968		367 968
PFCs	NO			NO
Unspecified mix of HFCs and PFCs	NO			NO
SF_6	148			148
NF_3	NO			NO
Total Annex A sources	**8 430 582**	**8 466 671**		**8 466 671**
Activities under Article 3, paragraph 3, of the Kyoto Protocol for 2015				
3.3 AR	NE, NO			NE, NO
3.3 Deforestation	NE, NO			NE, NO
FM and elected activities under Article 3, paragraph 4, of the Kyoto Protocol for 2015				
3.4 FM	NE, NO, IE			NE, NO, IE

Table 12
Information to be included in the compilation and accounting database for 2014 for Cyprus
(t CO_2 eq)

	Original submission	*Revised estimates*	*Adjustment*	*Final*
Annex A emissions for 2014				
CO_2	6 878 367			6 878 367
CH_4	868 011			868 011
N_2O	317 691			317 691
HFCs	359 309	367 561		367 561
PFCs	NO			NO
Unspecified mix of HFCs and PFCs	NO			NO
SF_6	148			148
NF_3	NO			NO
Total Annex A sources	**8 423 526**	**8 431 778**		**8 431 778**
Activities under Article 3, paragraph 3, of the Kyoto Protocol for 2014				
3.3 AR	NE, NO			NE, NO
3.3 Deforestation	NE, NO			NE, NO
FM and elected activities under Article 3, paragraph 4, of the Kyoto Protocol for 2014				
3.4 FM	NE, NO, IE			NE, NO, IE

Table 13
Information to be included in the compilation and accounting database for 2013 for Cyprus
($t CO_2 eq$)

	Original submission	*Revised estimates*	*Adjustment*	*Final*
Annex A emissions for 2013				
CO_2	6 487 246			6 487 246
CH_4	873 326			873 326
N_2O	324 040			324 040
HFCs	363 976			363 976
PFCs	NO			NO
Unspecified mix of HFCs and PFCs	NO			NO
SF_6	150			150
NF_3	NO			NO
Total Annex A sources	**8 048 738**			**8 048 738**
Activities under Article 3, paragraph 3, of the Kyoto Protocol for 2013				
3.3 AR	NE, NO			NE, NO
3.3 Deforestation	NE, NO			NE, NO
FM and elected activities under Article 3, paragraph 4, of the Kyoto Protocol for 2013				
3.4 FM	NE, NO, IE			NE, NO, IE

Annex III

Additional information to support findings in table 2

Missing categories that may affect completeness

The categories for which methods are included in the 2006 IPCC Guidelines that were reported as "NE" or for which the ERT otherwise determined that there may be an issue with the completeness of reporting in the Party's inventory are the following:

(a) CO_2 emissions from carbide production under category 2.B.5 (see ID# I.6 in table 3);

(b) CO_2 emissions from lubricant use under category 2.D.1 (see ID# I.7 in table 3);

(c) HFC emissions from refrigeration and air conditioning under category 2.F.1 (see ID# I.12 in table 3);

(d) CO_2 emissions from all pools for cropland, grassland, settlements, wetlands and other land (see ID# L.9 in table 3);

(e) CO_2 emissions from living biomass, litter, dead wood and soil organic carbon on land converted to forest land (see ID# L.9 in table 3);

(f) CO_2 emissions from litter, dead wood and soil organic carbon on forest land remaining forest land (see ID# L.9 in table 3);

(g) CO_2, CH_4 and N_2O emissions from forest fires on land converted to forest land for 2011 (see ID# L.10 in table 3);

(h) N_2O emissions from N inputs to managed soils on forest land remaining forest land (inorganic and organic fertilizers) and land converted to forest land (inorganic fertilizers) (see ID# L.9 in table 3);

(i) CH_4 and N_2O emissions from drainage and rewetting and other management of mineral soils on forest land (see ID# L.9 in table 3);

(j) Direct N_2O emissions from N mineralization/immobilization associated with loss/gain of soil organic matter on forest land, cropland and grassland (see ID# L.9 in table 3);

(k) Indirect N_2O emissions from managed soils (see ID# L.9 in table 3);

(l) CH_4 and N_2O emissions from biomass burning on all land areas except wildfires on forest land remaining forest land, and settlements (see ID# L.10 in table 3);

(m) CO_2 emissions from HWP (see ID# L.19 in table 5);

(n) Emissions and removals from AR, deforestation and FM (see ID# KL.1 in table 3).

Annex IV

Documents and information used during the review

A. Reference documents

Reports of the Intergovernmental Panel on Climate Change

IPCC. 2000. *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*. J Penman, D Kruger, I Galbally, et al. (eds.). Hayama, Japan: IPCC/Organisation for Economic Co-operation and Development/International Energy Agency/Institute for Global Environmental Strategies. Available at http://www.ipcc-nggip.iges.or.jp/public/gp/english/.

IPCC. 2006. *2006 IPCC Guidelines for National Greenhouse Gas Inventories*. S Eggleston, L Buendia, K Miwa, et al. (eds.). Hayama, Japan: Institute for Global Environmental Strategies. Available at http://www.ipcc-nggip.iges.or.jp/public/2006gl.

IPCC. 2014. *2013 Revised Supplementary Methods and Good Practice Guidance Arising from the Kyoto Protocol*. T Hiraishi, T Krug, K Tanabe, et al. (eds.). Hayama, Japan: Institute for Global Environmental Strategies. Available at http://www.ipcc-nggip.iges.or.jp/public/kpsg.

IPCC. 2014. *2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands*. T Hiraishi, T Krug, K Tanabe, et al. (eds.). Geneva: IPCC. Available at http://www.ipcc-nggip.iges.or.jp/public/wetlands/.

Annual review reports

Reports on the individual review of the 2013, 2015 and 2016 annual submissions of Cyprus, respectively, contained in documents FCCC/ARR/2013/CYP, FCCC/ARR/2015/CYP and FCCC/ARR/2016/CYP.

Other

Aggregate information on greenhouse gas emissions by sources and removals by sinks for Parties included in Annex I to the Convention. Note by the secretariat. Available at http://unfccc.int/resource/webdocs/agi/2017.pdf.

Annual status report for Cyprus for 2017. Available at http://unfccc.int/resource/docs/2017/asr/CYP.pdf.

Cohen DR, Rutherford NF, Morisseau E, et al. 2011. *Geochemical Atlas of Cyprus*. Sydney: UNSW Press.

Cohen DR, Rutherford NF, Morisseau E, et al. 2012. Geochemical patterns in the soils of Cyprus. *Science of The Total Environment*. 420: pp.250–262.

B. Additional information provided by the Party

Responses to questions during the review were received from Ms. Nicoletta Kythreotou (Department of Environment, Ministry of Agriculture, Rural Development and Environment of Cyprus), including additional material on the methodology and assumptions used. The following documents[1] were also provided by Cyprus:

Department of Environment Ministry of Agriculture, Rural Development and Environment. 2016. *Cyprus' QA/QC and verification system manual*. Nicosia.

Department of Environment Ministry of Agriculture, Rural Development and Environment. 2016. *Cyprus' National Inventory Improvement Plan*. Nicosia.

Department of Environment Ministry of Agriculture, Rural Development and Environment. 2016. *Work plan with the aim at enhancing the functionality of the National System of Cyprus*. Nicosia.

Department of Environment Ministry of Agriculture, Rural Development and Environment. 2017. *Cyprus' National Inventory Improvement Plan*. Nicosia.

[1] Reproduced as received from the Party.